Annual Report
of the
Chief Inspector of Mines
in India

1938 & 1939

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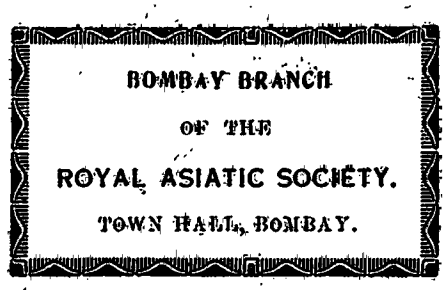

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INDIAN MINES ACT, 1923

ANNUAL REPORT

OF THE 134450

CHIEF INSPECTOR OF MINES IN INDIA

FOR THE YEAR ENDING

31st DECEMBER 1938

1938 & 1939

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FROM

W. KIRBY, ESQ., B.Sc., M.I.Min.E.,
CHIEF INSPECTOR OF MINES IN INDIA.

To

THE SECRETARY TO THE GOVERNMENT OF INDIA,
DEPARTMENT OF LABOUR,
SIMLA.

Dated Dhanbad, the 27th May 1939.

SIR,

I have the honour to submit the report upon the inspection of mines in British India for the year ending 31st December 1938.

INTRODUCTION.

The Indian Mines Act, 1923, applies to British India only and not to the Indian States. For the complete figures of production of all minerals raised from excavations of all depths in British India and the Indian States reference may be made to the statements of the "Mineral Production of India" published annually in the records of the Geological Survey of India, and to the "Quinquennial Review of the Mineral Production of India" published every five years by the same Department. Detailed information of the mineral industries in Mysore—where the Kolar gold field is situated—and Hyderabad (Nizam's Dominions) is given in the annual reports of the Chief Inspector of Mines in those States.

Section I.—Persons Employed.

During the year 1938 the daily average number of persons working in and about the mines regulated by the Indian Mines Act was 306,260, as compared with 267,858 in the previous year. The former figure is the highest on

record. The increase was 38,402 persons, or 10·60 per cent. Of these persons 140,651 worked underground, 83,333 in open workings and 82,276 on the surface. The number of men who worked underground, in open workings and on the surface and the women who worked in open workings and on the surface, were as follows :—

	Men.		Women.	
	1938.	1937.	1938.	1937.
Underground . . .	140,651	118,920	..	3,887
In open workings . .	54,121	48,268	29,212	24,479
Surface	58,199	52,387	24,077	19,917
Total .	252,971	219,575	53,289	48,283

The daily average number of persons employed in coal mines was 201,093 which is 29,944 more than the number employed in 1937. Of these persons 53,735 were males employed in cutting coal, 32,235 were males employed as loaders of coal and 23,515 were women.

The increase in the daily average number of persons employed in coal mines in 1938, as compared with 1937, is reflected in the large quantity of coal produced.

Annual returns are now received of the number of persons actually at work and also of persons who should ordinarily have been at work but were absent on a selected day in February of each year. The returns relate only to coal mines. The day to which the returns apply must be the day of a week selected by the Chief Inspector in which there is the largest turn-out of workers. For February 1939, the week selected by me was as follows :—

Bengal, Bihar and Orissa	12th to 18th.
Assam, Baluchistan, the Central Provinces and the Punjab .	5th to 11th.

Although these returns are for a day in 1939, they are included in this report as they would be more than a year out of date if held over till the submission of the report for the year in which they are made.

The returns for 1939 show that on the day selected 263,763 persons were either at work or were prevented from attending work. This figure is 62,670 more than the average number of persons employed in coal mines during 1938. Three of the important district comparisons are as follows :—

	Average daily attendance.	Attendance on selected day (absentees included).	Excess over average daily attendance.	Percentage excess.
Jharia Coalfield . . .	88,679	111,372	22,693	25·59
Raniganj Coalfield . .	67,903	89,421	21,518	31·69
Central Provinces Coalfield .	13,771	18,120	4,349	31·58

Some of the percentanges of absentees are as follows :—All mines from which returns were received 7·5 ; Jharia 3·3 ; Raniganj 7·7 ; and the Central

Provinces 6·1. It is probable that the reason for the low percentage of absentees in the Jharia coalfield is that a larger proportion of the labour force is resident at or near the mines than in the other areas. A detailed statement compiled from the returns is given in Appendix I, Table No. 1-A.

Figures showing the average output of coal per person employed are given below :—

	Tons of coal per person employed.			
	Underground and in open workings.		Above and below ground.	
	1938.	1936-37.	1938.	1936-37.
British India	182	185	126	128
Bengal and Bihar	184	188	127	130
Assam	159	151	113	105
Baluchistan	33	43	31	42
Central Provinces	173	169	120	122
Orissa	165	202	122	151
Punjab	111	110	67	70

There was a general decrease in the average output of coal per person employed except in the Punjab and Assam. In comparing the figures with similar figures in other countries it should be remembered that both men and women are employed in Indian coal mines. In 1937, the output of coal per person employed above and below ground in the United Kingdom was 304 tons. In the same year, *i.e.*, 1937, comparative figures in certain other countries were Japan 207 tons; France 191 tons; Germany 372 tons; and the United States of America 761 tons.

The number of persons employed in metalliferous (including mica, stone, clay and salt) mines was 105,167, which is 8,458 more than the number employed in 1937. 75,393 were men and 29,774 were women.

Bengal, Bihar and Orissa.—At the beginning of the year there was a plentiful supply of labour and the removal of women from the mines appeared to have very little or no effect on output. The standard of wages was comparatively high. There was a good deal of labour unrest during the year. Strikes occurred at several collieries and at one colliery the strike lasted for three months and it was necessary to institute proceedings against some of the strikers for interfering with men engaged on matters of safety at the mine.

The general health of the mining population in the Jharia and Raniganj coalfields was on the whole satisfactory. The death rate per thousand persons was higher in both the Raniganj and Jharia Mining Settlements. Details of the activities of the Mines Board of Health in the Raniganj and Jharia coalfields are given in Section V of this report, from which it will be seen that the work of both the Boards is being satisfactorily maintained.

In the iron ore mines of Singhbhum district there was a brisk demand for iron ore and a number of small mines re-opened during the year to meet the demand, which towards the end of the year declined somewhat. This re-opening of a number of mines led to a shortage of labour during part of the year and intensified the labour shortage during the harvest periods. There was no serious labour trouble and the large companies made concessions, such as leave with pay, sick leave, and maternity benefit to their employees. There was also a general increase in wages with improvement in housing and education.

At the copper mines worked by the Indian Copper Corporation, Limited, in the Singhbhum district, operations were seriously dislocated due to a strike which broke out at the Mosaboni mine in April, lasting approximately for three months. Operations at the smelter site at Moubhander were continued throughout the year but were badly hampered through lack of ore. The management and the workers eventually agreed that the various points at variance should be placed before a Conciliation Board appointed by the Government, and as a result of this Board various concessions were made by the management and operations were resumed and soon continued to be normal. As a result of the above-mentioned strike the output of copper was considerably reduced during the year.

At the mica mines of Chota Nagpur the supply of labour was adequate, as due to the falling off in demand for "splittings", comparatively few dumps were worked. In certain districts there was a slight increase in wages. Prices for the larger sizes of block mica had an upward tendency, not so much because of increased demand but due to the fact that reserved stocks no longer existed and production in general appeared to be on the decline. There have been no serious epidemics during the year and labour conditions on the whole were very satisfactory.

Assam.—There was a plentiful supply of labour during the year and better wages were paid to the labour. The incidence of malaria which still remains the biggest problem was slightly less than in 1937. There were no epidemic diseases and the general health showed an improvement.

Central Provinces.—In the Pench Valley coalfield there was a shortage of labour from the close of the monsoon period until the end of the year. There was no change in the rate of wages and relations between labour and employers were good. A cholera epidemic resulted in 127 attacks with 42 deaths and 15,667 cholera inoculations were given, additional staff being employed for this work, and many surrounding villages within a radius of several miles and from which no colliery labour was employed being also voluntarily visited and the inoculation of the villagers systematically carried out. Apart from this epidemic the general health was very good.

At the manganese mines in the Central Provinces there was a large drop in the amount of ore exported in 1938 as compared with 1937 due, it is presumed, to buyers over-estimating their requirements in 1937 and ore from manganese mines in other parts of the world coming into the market in large quantities. There was a general increase in wages in all districts. There were no disputes or strikes of any description. During the year cholera in epidemic form was general in three districts but fortunately the

mine authorities were able to get the entire labour population inoculated against the disease before it established itself at any of the mines. Other precautionary measures were taken and there were in all 24 attacks of cholera resulting in 16 deaths. There were also 3 attacks of small-pox and one death.

Punjab.—Labour conditions remained unaltered with the supply again exceeding the demand. The industry, however, is sheltered and there was no real distress in the mining community which enjoys a good and steady income, irrespective of the labour conditions outside. There was no epidemic and the health of the workers remained very satisfactory. In addition to an Assistant Surgeon, a Lady Sub-Assistant Surgeon and a Sanitary Inspector were again employed to supervise the welfare of the workers and to maintain and improve sanitary conditions.

Madras.—There was a general improvement in the mica trade during the year and the labour was plentiful. Good wages were paid and there were no strikes or epidemics. The relations between employers and labour continued to be good.

In the table on page 6 figures are given of the average daily wages paid in December in each important mining field in India. If the figures are compared with those in last year's Annual Report it will be seen that there was a small general increase in the wages paid to underground miners and to other classes of labour in practically all the coalfields.

Average daily earnings in December 1938.

Mineral Field.	UNDERGROUND.												OPEN WORKINGS.												SURFACE.											
	Overmen and Sirdars. — Foremen and Mates.			Miners.			Loaders.			Skilled Labour.			Unskilled Labour.			Overmen and Sirdars. — Foremen and Mates.			Miners.			Loaders.			Skilled Labour.			Unskilled Labour.			Females.			Clerical and Supervising Staff.			Skilled Labour.			Unskilled Labour.			Females.		
	R	a.	p.	R	a.	p.	R	a.	p.	R	a.	p.	R	a.	p.	R	a.	p.	R	a.	p.	R	a.	p.	R	a.	p.	R	a.	p.	R	a.	p.	R	a.	p.	R	a.	p.	R	a.	p.
Jharia Coalfield (Bihar)	1	2	9	0	9	6	0	8	3	0	10	9	0	7	6	0	14	6	0	8	9	0	7	0	0	8	9	0	6	3	0	5	3	1	3	3	0	10	6	0	6	9	0	4	6
Raniganj Coalfield (Bengal)	1	1	0	0	9	3	0	7	9	0	10	0	0	6	9	0	11	9	0	8	6	0	5	9	0	7	3	0	7	9	0	5	3	1	0	0	0	9	6	0	6	3	0	4	0
Giridih Coalfield	2	5	0	0	9	9	0	11	6	0	12	9	0	8	0	0	5	0	0	3	0	..			0	5	3	..			0	2	6	2	0	9	0	13	6	0	7	9	0	4	0
Assam Coalfield	1	4	6	1	0	0	1	0	0	1	1	3	0	13	0	1	3	0	1	0	0	0	11	0	0	15	0	0	10	9	0	8	0	1	12	6	0	14	0	0	12	0	0	7	6
Punjab Coalfield	1	0	9	1	0	6	1	0	9	0	11	9	0	7	6	..			..			..			..			..			..			0	12	9	0	11	6	0	8	6	0	2	9
Baluchistan Coalfield	1	4	3	0	10	9	0	10	9	0	11	3	..			..			..			0	9	0	0	9	0	..			..			..			0	9	9	0	9	9	..		
Pench Valley Coalfield (Central Provinces).	1	2	0	0	13	0	0	7	3	0	9	6	0	7	3	1	0	0	0	9	9	0	6	0	0	7	3	0	6	3	0	3	6	0	15	3	0	9	3	0	6	9	0	3	9
Bihar Mica	0	10	6	0	7	3	..			0	7	9	0	5	6	0	8	3	0	7	3	..			0	7	9	0	5	9	0	3	6	0	14	3	0	6	6	0	5	3	0	3	3
Madras Mica	0	9	6	0	5	9	..			0	5	6	0	4	9	0	9	9	0	5	0	..			0	5	0	0	4	9	0	3	3	0	10	3	0	5	3	0	4	9	0	3	6
Central Provinces Manganese	0	14	0	0	6	6	..			0	9	9	0	6	0	0	14	0	0	4	3	..			0	7	6	0	4	6	0	3	3	1	4	0	0	11	3	0	5	3	0	3	6
Central Provinces Limestone	..			..			..			..			..			0	9	6	0	6	3	..			0	7	0	0	3	9	0	2	9	1	3	0	0	5	0	0	3	9	0	3	0
Bihar Iron	..			..			..			..			..			0	13	9	0	5	0	..			0	11	3	0	5	9	0	3	9	1	4	3	1	0	9	0	5	3	0	4	0
Punjab Salt	8	4	6	2	5	6	..			0	14	6	0	8	9	..			..			..			..			..			..			0	15	0	1	3	6	0	6	0	..		
Bihar China clay	0	10	9	0	6	3	..			..			0	4	3	0	5	0	0	2	9	..			0	5	3	0	3	6	0	2	6	1	3	9	0	7	6	0	3	6	0	2	9
Punjab Slate	..			..			..			..			..			0	8	9	0	6	9	..			0	5	9	0	4	6	..			1	1	3	0	12	0	0	6	6	..		
United Provinces Stone	..			..			..			..			..			0	6	9	0	9	3	..			0	5	6	0	3	9	0	3	0	0	10	6	0	4	0	0	12	0	0	2	6

Section II.—Output of Minerals.

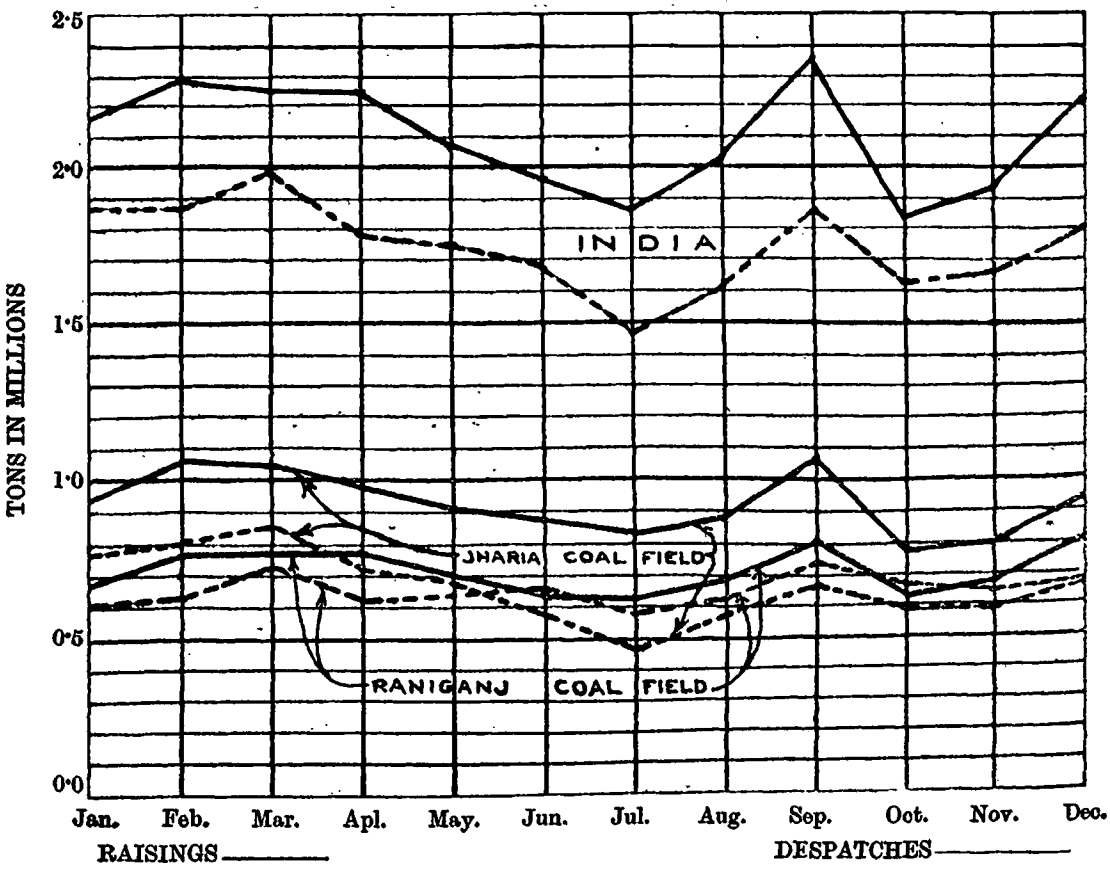
Output.—The statement given below shows the output of coal in the various provinces in British India during the years 1937 and 1938.

Output in tons.

	1938.	1937.
Assam	267,300	243,650
Baluchistan	14,388	10,624
Bengal	7,745,372	6,527,820
Bihar	15,362,604	13,835,516
Central Provinces	1,658,626	1,504,159
Orissa	44,425	47,127
Punjab	184,028	166,632
Total	25,276,743	22,335,528

The total output in 1938 was 25,276,743 tons of a declared value of Rs. 9,46,27,865. The total output is the highest yet recorded, the next highest being 22,683,861 tons in 1930. The increase in the output was 2,941,215 tons, *i.e.*, 13·17 per cent. and the increase in the value of Rs. 2,47,48,726, *i.e.*, 35·42 per cent. The opening stocks in 1938 were 836,491 tons and the closing stocks 2,193,511 tons. In the charts which appear below the raisings and despatches of coal are shown month by month:—

RAISINGS AND DESPATCHES OF COAL MONTH BY MONTH IN 1938.



It will be seen from the chart that, as usual, the output was highest in the first three months of the year. The fall of output in October was greater than usual due to the early harvesting season.

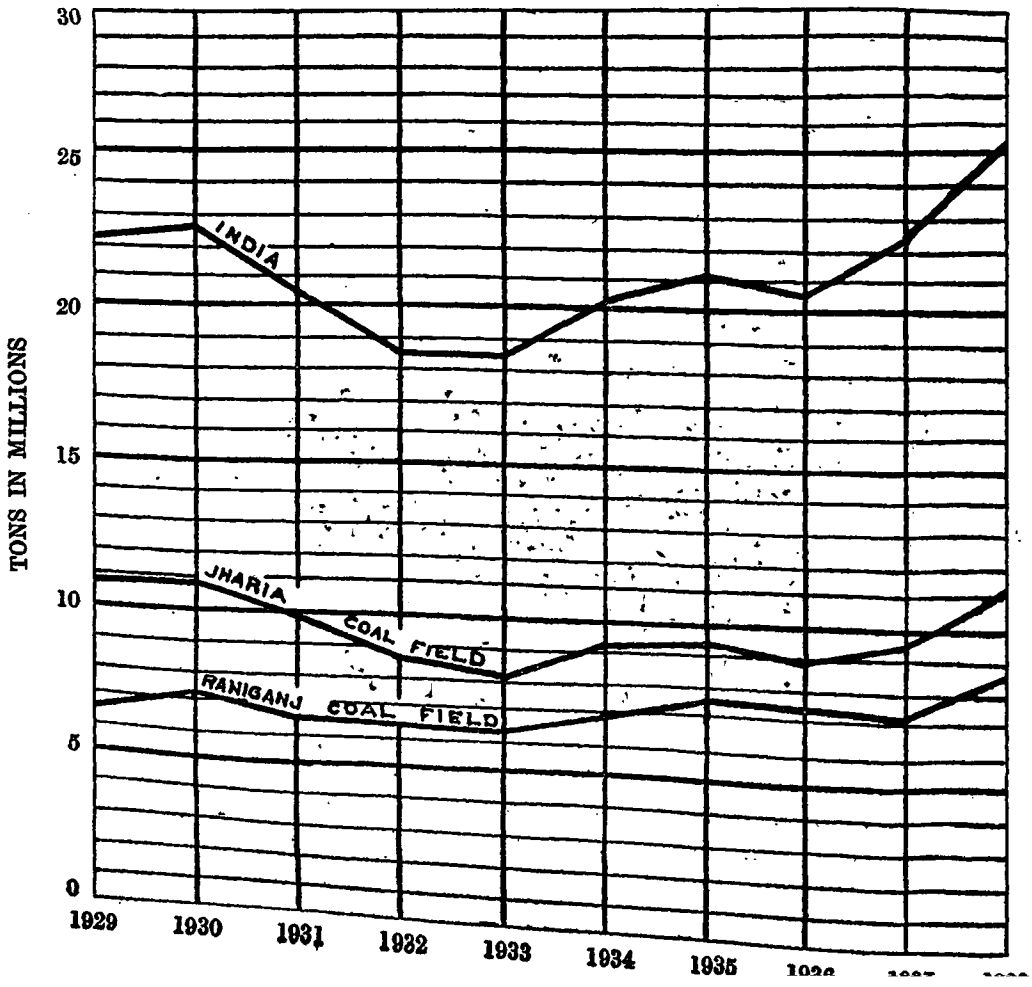
The output in Bihar increased by 1,527,088 tons; there was a decrease of 2,702 tons in the province of Orissa; and in Bengal there was an increase of 1,217,552 tons. In the Central Provinces the output increased from 1,504,159 tons to 1,658,626 tons. There were increases of 17,396 tons in the Punjab, and 3,764 tons in Baluchistan. There was also an increase of 23,650 tons in Assam.

The figures of output for the principal coalfields are as follows:—

Coalfield.	1938.	1937.	Percentage increase +. or decrease —.
Jharia	11,144,462	9,601,230	+16·07
Raniganj	8,650,920	7,196,324	+20·21
Bokaro	2,007,016	2,309,170	—13·08
Giridih	636,371	674,794	—5·69
Karanpura . . .	625,914	534,328	+17·14
Pench Valley . . .	1,369,208	1,234,233	+10·94
Assam	267,300	243,650	+9·71

The output of the Jharia coalfield increased by about 16 per cent., the Raniganj coalfield increased by about 20 per cent., the Karanpura coalfield increased by about 17 per cent., and the output of the Assam coalfield by about 9¾ per cent. There was an increase in the Pench Valley coalfield of the Central Provinces of about 11 per cent. and in the Bokaro coalfield a decrease of 13 per cent. In the Giridih coalfield the output fell by over 5½ per cent. The accompanying chart shows the variation of the output of coal during the period 1929-1938:—

CHART SHOWING OUTPUT OF COAL DURING THE PERIOD 1929-38.



Despatches.—The despatches of coal were 21,056,367 tons, and 1,442,572 tons, or 5·71 per cent. of the raisings were consumed on the collieries. The quantity of coal used for coking at the collieries was 1,420,784 tons, and 900,923 tons of soft coke and 103,844 tons of hard coke were made. There was an increase, *i.e.*, 7·62 per cent. in the quantity of soft coke manufactured at the collieries for domestic consumption. The quantity of hard coke made at the collieries is small. Most of the hard coke is made at coke-making plants which do not come under the Mines Act, and 1,627,077 tons of coal were despatched to coke-making plants of this kind in 1938. This quantity is 301,675 tons less than in 1937. Analyses of the figures relating to the output of coal and the manufacture of coke will be found in Appendix I, Table No. 3.

The despatches of coal for the year were more than those for 1937 by 1,113,813 tons. The stocks of coal at the collieries at the end of the year were much more than at the beginning.

The following figures giving the average value per ton of coal put into wagons in various districts may be of interest:—Assam, Rs. 9 annas 10·5; Baluchistan, Rs. 6 annas 12·5; Bengal, Rs. 4 annas 6·9; Bihar (Jharia coalfield), Rs. 4 annas 9·6; Central Provinces, Rs. 3 annas 15·2; and the Punjab, Rs. 5 annas 12·6. There was an all-round increase in the average value per ton of coal. In Assam it was Re. 1 annas 8·2; in Baluchistan, anna 0·2; in Bengal, Re. 1 anna 0·6; in Bihar, Re. 1 anna 1; in the Central Provinces, annas 7·2; and the Punjab, annas 10·1, respectively.

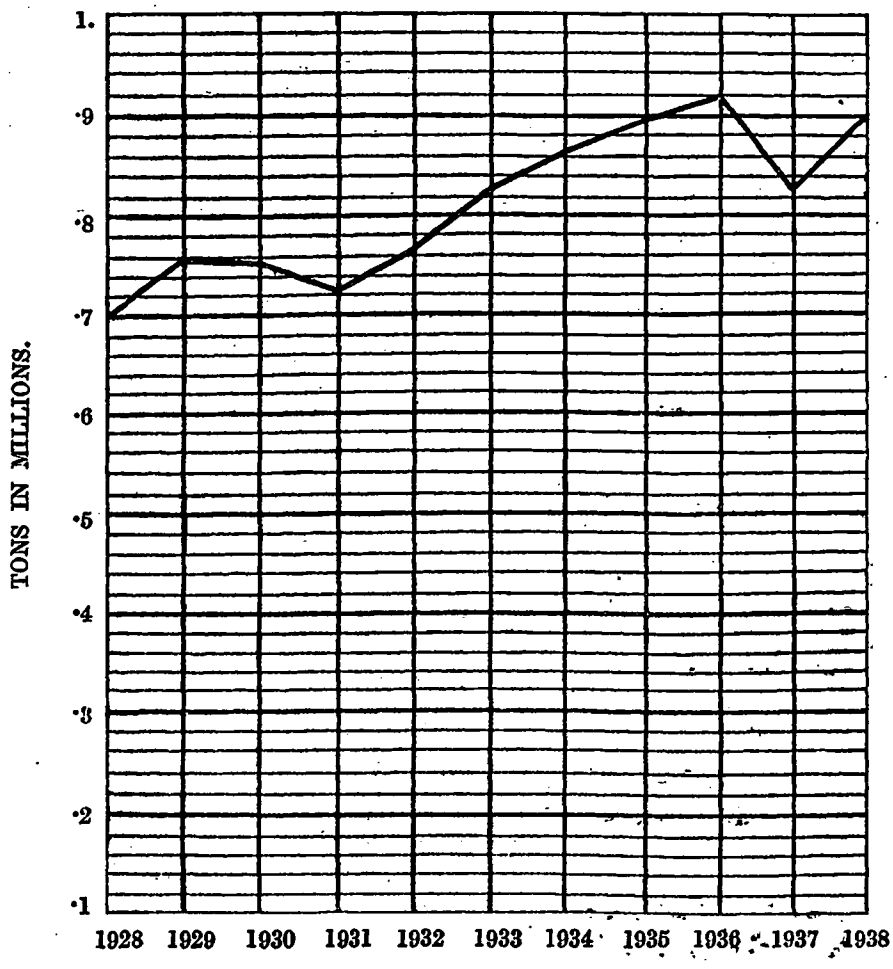
Trade Conditions.—Early in the year there was a wagon shortage which assisted in the maintenance of high prices but as soon as there was an adequate supply of wagons it appeared that trading concerns up-country had been accumulating stocks which were likely to meet a large part of their requirements for the year. Collieries raising first class coal were fully committed, but the smaller collieries in the Kajora field and some of the collieries in the Jharia field raising lower grade coal found it difficult to dispose of even a small portion of their output. At the end of the year stocks of all classes of coal were very heavy. Had it not been for the export demand to the Far East which led to an increase in the quantity of coal exported as compared with 1937, the position would have been extremely difficult and the forward outlook bad.

Coal Grading Board and Soft Coke Cess Committee.—The Indian Coal Grading Board continued to maintain its standard of good work during the year and the quality of coal exported was generally satisfactory. During the year 2,206,841 tons of coal were exported under the supervision of the Board, as compared with 1,832,735 tons in the previous year, or an increase of 374,106 tons.

The Soft Coke Cess Committee continued to work on the same lines as in former years. Propaganda for popularising soft coke as domestic fuel was continued. The arrangement for the inspection of loading soft coke wagons at the collieries was maintained and the Committee are carrying on experiments for the improvement in the quality of soft coke. During the year the prices of soft coke remained very high and despatches were adversely affected. Approximately 889,671 tons of soft coke were

despatched from the coalfields in the year 1938, as compared with 830,784 tons during the year 1937. Out of the output for 1938, 846,612 tons were despatched from mines in the Jharia coalfield. The accompanying graph shows the development of the soft coke industry during the last ten years.

DESPATCHES OF SOFT COKE FROM 1928 TO 1938.



Use of Electricity both at Coal Mines and at other mines.—The number of coal mines using electrical energy was 136, as compared with 124 in 1937, and the aggregate horse power employed at coal mines increased from 86,804 to 98,077, *i.e.*, by 13 per cent. The increase is due chiefly to the increased horse power of motors installed in Jharia and Raniganj coalfields. The increase in horse power during the year in the Jharia coalfield is 3,567 and that in the Raniganj coalfield is 7,657. During the year electrical plant was installed and brought into operation in seven additional mines and was re-introduced in two mines. Of mines using electricity, four were re-opened and one was closed.

Electricity was used in 21 metalliferous mines, as against 20 in 1937, and the aggregate horse power employed was 7,751, as against 7,246 in the previous year.

Statistics of the electrical plant in use at mines in the various provinces of British India and in certain mine fields are contained in Appendix I, Table Nos. 7, 8 and 9.

Explosives.—During the year 3,479,883 lb. of gunpowder, 93,788 lb. of high explosives, and 290,131 lb. of "permitted" explosives were used at coal mines. These figures compare with 2,751,418 lb. of gunpowder, 61,840 lb. of high explosives, and 220,519 lb. of "permitted" explosives used in 1937. In addition 125,346 lb. of liquid oxygen explosives were used. These explosives were used in quarries in the Bokaro coalfield. A statement of the kind and quantity of explosives used during the year in the different kinds of mines under the Act is given in Appendix I, Table No. 12.

Coal Cutting Machines.—The number of coal cutting machines in use was 186, as compared with 140 in 1937, and 110 in 1936. All the machines were worked by electricity. 53 machines were at work in the Jharia coalfield, 115 machines in the Raniganj coalfield, 3 in the Karanpura coalfield, 2 in the Giridih coalfield, 3 in the Bokaro coalfield and 10 in the Central Provinces. During the year there was an increase of seven machines in the Jharia coalfield and of thirty-seven machines in the Raniganj coalfield. Coal cutting machines were in use in 66 mines, as against 50 in 1937, and 39 in 1936. Besides coal cutting machines, six pneumatic picks worked by compressed air were in use in one mine. The total area undercut was 8,827,200 square feet, as compared with 6,890,160 square feet undercut in 1937. Some collieries are equipped for intensive machine mining with coal cutting machines and mechanical loaders.

Mechanical Ventilators.—In Appendix I, Table No. 10, particulars are given of the number of mechanical ventilators in use in coal mines under the Act. In 1938, 128 mechanical ventilators were in use, the number being 117 in the previous year.

Safety Lamps.—In Appendix I, Table No. 11, particulars are given of the number of safety lamps in use in coal mines under the Act. 46,520 safety lamps were in use in 1938, as compared with 42,932 in 1937.

Iron Ore.

The production of iron ore was 1,421,090 tons, valued at Rs. 26,89,996 as compared with 1,587,362 tons, valued at Rs. 27,30,077 in 1937.

Manganese Ore.

There was a decrease of 33,939 tons in the output of manganese ore, the figures of production being 766,341 tons, valued at Rs. 1,23,81,646, as compared with 800,280 tons, valued at Rs. 1,21,06,593 in 1937. The average reported value per ton of manganese ore produced rose from 15·13 in 1937 to Rs. 16·16 in 1938. The corresponding value in 1936 was 7·94. The Central Provinces Manganese Ore Company, Limited, despatched a total of 362,588 tons as follows:—102,097 to Calcutta; 195,697 tons to Vizagapatam; 34,352 tons to Bombay; and 30,442 tons of other sales on f.o.r. basis. The quantity despatched by the company in 1937 was 754,367 tons so that the despatches in 1938 were much less than those in 1937.

The average f.o.b. price realised in 1938 was 10·66 annas per unit, which is much more than the price obtained in the previous year. A sudden heavy demand and consequent high price which prevailed in 1937 did not continue into 1938, although a good deal of the high priced ore sold in 1937 was actually delivered in 1938. Buyers apparently over-estimated their requirements in 1937 and ore from manganese mines in other parts of the world came on to the market in large quantities. As a result there was a large drop in the amount of ore exported in 1938 as compared with 1937.

Gold.

The output of gold in 1938 was 16 ounces, valued at Rs. 996, which was obtained from the Singhbhum and Manbhum districts of Bihar.

Chromite Ore.

The production of chromite ore was 27,086 tons, valued at Rs. 4,25,942, as compared with 35,386 tons, valued at Rs. 5,13,473.

Copper Ore.

The output of copper ore was 288,076 tons, valued at Rs. 32,40,640, as compared with 371,458 tons, valued at Rs. 48,69,790 in 1937. The whole of the production came from the mines belonging to the Indian Copper Corporation, Limited, in the Singhbhum district in Bihar. The production of refined copper amounted to 5,330 tons, as compared with 6,830 tons in 1937. The production of yellow metal sheet and circles at the rolling mills was 9,363 tons, involving the use of 5,527 tons of copper.

Mica.

The quantity of mica consigned was 101,633 cwt., valued at Rs. 40,89,448, as compared with 94,811 cwt., valued at Rs. 39,16,718 in 1937. The output of dressed mica in 1938 was 108,835 cwt., as compared with 103,641 cwt., in 1937. In addition, 34,109 cwt., of waste mica fit for "splittings" valued at Rs. 1,37,329, were consigned from Nellore district, Madras Presidency, and 1,419 cwt., valued at Rs. 345, from Ajmer-Merwara district in Rajputana. The output of this kind of mica was 36,975 cwt.

The quantities of mica and "splittings" shipped in 1937 and 1938 were as follows:—

	Cwt.	Rs.
1937	134,425	1,16,73,944
1938	79,621	95,85,168

In addition, 63,161 cwt. of "pattern cut" and scrap mica having a value of Rs. 4,00,019 were shipped, as compared with 120,191 cwt., valued at Rs. 9,63,873 in 1937.

Rock-salt.

The production of rock-salt was 164,674 tons, as compared with 163,813 tons in the previous year.

Limestone.

The reported production of limestone was 1,582,058 tons, valued at Rs. 17,09,905, as compared with 1,318,598 tons, valued at Rs. 13,88,468 in 1937.

Stone.

Returns were submitted by the owners of one hundred and twenty-six stone mines, and the figures of production were as follows :—1,456,771 tons of igneous rock ; 18,612 tons of sandstone ; 47,542 tons of gravel ; and 43,763 tons of murrum. The total production was 1,566,688 tons, as compared with 1,315,569 tons in 1937.

Clays.

From the thirty-five clay mines from which figures were obtained 46,407 tons of fire-clay, 11,007 tons of china clay and 61,565 tons of ordinary clay were produced.

Other Minerals.

The production of other minerals were as follows :—10,134 tons of bauxite, valued at Rs. 16,272 ; 7,733 tons of slate, valued at Rs. 1,57,276 ; 23,052 tons of magnesite, valued at Rs. 1,34,876 ; 23,242 tons of gypsum, valued at Rs. 91,435 ; 3,280 tons of barytes, valued at Rs. 10,100 ; 2,298 tons of steatite, valued at Rs. 9,836 ; 246 tons of ochre, valued at Rs. 2,226 ; 605 tons of felspar, valued at Rs. 3,545 ; 23 tons of apatite, valued at Rs. 119 ; and 832 tons of Kyanite, valued at Rs. 16,292. Small quantities of asbestos, beryl, corundum, graphite and fuller's earth were also produced.

Section III.—Accidents.

During the year 1938, at mines regulated by the Indian Mines Act, 1923, there were 248 fatal accidents which is 40 more than in 1937, and 59 more than the average number in the preceding five years.

In addition to the fatal accidents there were 1,165 serious accidents, involving injuries to 1,196 persons, as compared with 1,085 serious accidents, involving injuries to 1,115 persons in the previous year. The so-called "serious" accidents reported are those in which an injury has been sustained which involves, or in all probability will involve, the permanent loss of or injury to the sight or hearing or the fracture of any limb or the enforced absence of the injured person from work for a period exceeding twenty days. Two hundred and eighty-three persons were killed and 1,233 persons were seriously injured. The latter figure includes 37 persons injured in fatal accidents. The number of persons killed was 35 more than in 1937. 276 persons killed were men and 7 were women. In one case 9 lives, in one case 4 lives, in four cases 3 lives and in fourteen cases 2 lives were lost.

The proportion of accidents which occurred to men underground, in open workings, and on the surface and to women in open workings and on the surface were as follows :—

—	No. of fatal accidents.	No. of men killed.	No. of women killed.	Death rate per 1,000 persons employed.		No. of serious accidents.	No. of men injured.	No. of women injured.	Serious injury rate, per 1,000 persons employed.	
				Men.	Women.				Men.	Women.
Underground .	202	233	..	1·66	..	872	898	..	6·38	..
Open workings.	20	21	3	0·39	0·10	73	55	21	1·02	0·72
Surface . .	26	22	4	0·38	0·17	220	192	30	3·30	1·25

There was an increase in the death rate of men employed underground and on the surface and a decrease in open workings. With respect to women there was a decrease in the death rate in open workings and on the surface. The causes of the fatal accidents have been classified as follows :—

	No. of fatal accidents.	Percentage of total number of fatal accidents.
Misadventure	172	69·35
Fault of deceased	31	12·50
Fault of fellow workmen	17	6·86
Fault of subordinate officials . . .	19	7·66
Fault of management	9	3·63
Total .	248	100·00

There was an increase of 35 in the number of persons killed during 1938, as compared with 1937.

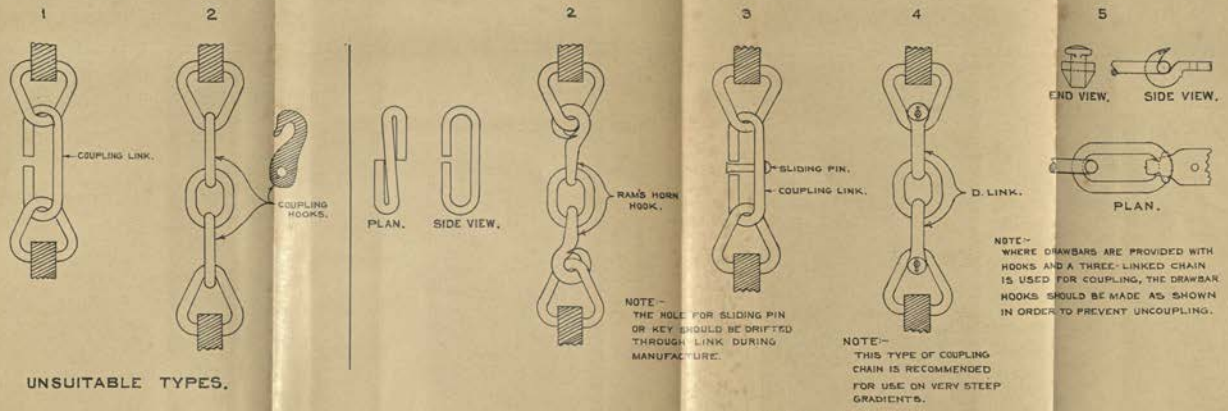
I have analysed the serious accidents and find that out of the total of 1,233 persons seriously injured 1 was permanently and totally disabled; 20 were permanently partially disabled and 1,212 were only temporarily disabled.

In addition, it was reported that 10,859 persons received minor injuries which necessitated the enforced absence from work for a period exceeding forty-eight hours. From the increase in the number of persons receiving minor injuries during the year it is obvious that many of the minor accidents were not reported until attention was drawn to the requirements of Section 20(3) of the Indian Mines Act.

Falls of roof and sides.—Falls of roof and sides caused 133 fatal accidents and 253 serious accidents. As compared with the figures under this head in the previous year the total number of accidents increased from 306 to 386; the number of persons killed increased from 148 to 166; and the number of persons seriously injured increased from 205 to 270. In one case nine lives; in three cases three lives and in five cases two lives were lost

FIGURE I.

SKETCHES SHOWING DIFFERENT TYPES OF TUB COUPLINGS.



UNSUITABLE TYPES.

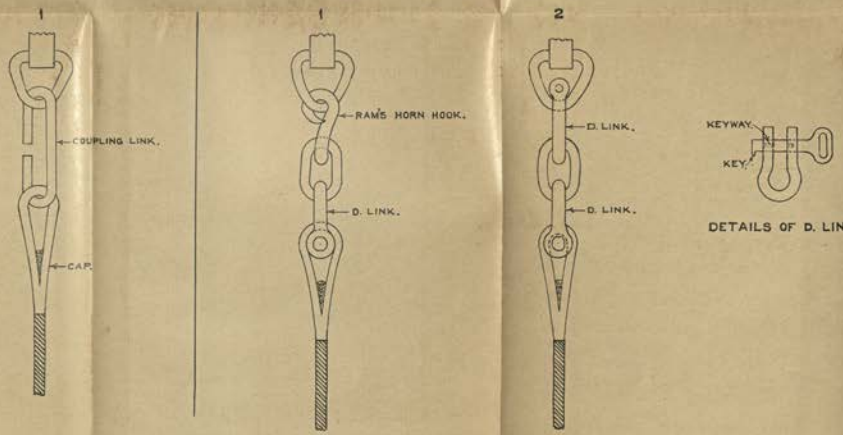
NOTE:- THE HOLE FOR SLIDING PIN OR KEY SHOULD BE DRIFTED THROUGH LINK DURING MANUFACTURE.

NOTE:- THIS TYPE OF COUPLING CHAIN IS RECOMMENDED FOR USE ON VERY STEEP GRADIENTS.

NOTE:- WHERE DRAWBARS ARE PROVIDED WITH HOOKS AND A THREE-LINKED CHAIN IS USED FOR COUPLING, THE DRAWBAR HOOKS SHOULD BE MADE AS SHOWN IN ORDER TO PREVENT UNCOUPLING.

SUITABLE TYPES.

SKETCHES SHOWING METHODS OF ATTACHING HAULAGE ROPES TO TUBS.



UNSUITABLE METHOD.

SUGGESTED METHODS.

DETAILS OF D. LINKS.

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Vandyked at the Survey of India Offices, Calcutta.

in depillaring areas; also in one case three lives and in six cases two lives were lost in galleries by falls of roof. The accidents by falls of sides include one in which four persons were killed in open workings, and in three other cases two lives were lost in galleries.

In Shafts.—There were 15 fatal accidents and 33 serious accidents in shafts, as compared with 10 fatal accidents and 32 serious accidents in the previous year.

Explosives—There were 10 fatal accidents and 38 serious accidents caused by explosives. In the previous year the figures were 13 and 31, respectively.

Irruption of Water.—There was one fatal accident by an irruption of water.

Haulage.—There were 40 fatal accidents and 257 serious accidents on haulage roads. The accidents due to haulage have been classified as follows:—

Classification.	Fatal.	Serious.	Total.
Haulage rope breaking	2	1	3
Coupling chains and hooks breaking	2	1	3
Drawbars breaking	..	..	..
Couplings becoming detached	1	6	7
Riding on sets (authorised)	1	10	11
Riding on sets (unauthorised)	3	8	11
Allowing tubs to run uncontrolled	8	33	41
While hand-tramming tubs	2	58	60
While guiding tubs on a curve	2	9	11
Following derailments or while re-railing tubs	10	53	63
While coupling or uncoupling tubs	..	18	18
While resting on or loitering about haulage roads or tramming levels.	3	15	18
Crushed against tubs, sides of roadways, doors, etc.	5	15	20
While spragging moving tubs	..	9	9
Unclassified	1	21	22
Total	40	257	297

I give below a table showing the fatal and serious accidents on haulage roads during the last five years:—

Year.	Fatal.	Serious.
1934	20	155
1935	20	161
1936	24	189
1937	32	218
1938	40	257

It will be seen that there has been a steady increase both in fatal and serious haulage accidents during the last five years. This increase is very regrettable as many of these accidents could have been prevented by better supervision; suitable haulage tracks and gear; and greater care on the part of persons employed on haulage roads.

There was a decrease in the number of accidents due to breakdown in materials, there being 6 in 1938, as compared with 11 in 1937. The employment of haulage gear of adequate strength and its maintenance in good order will greatly minimise this type of accident.

Accidents due to couplings becoming detached from tubs could be avoided to a large extent by using a suitable type of coupling, and types of couplings, which it is considered should be used on haulage roads, are shown in Figure 1.

There was an increase in the number of accidents resulting from set riding, there being 6 in 1937, as compared with 22 in 1938. The riding on haulage sets should be discouraged as far as possible. It is considered to be a dangerous practice to authorise men to ride on sets merely for the purpose of stopping sets if a derailment occurs, as several accidents have occurred due to the set rider not being able to get clear of derailed tubs. Set riding should only be permitted when there is a number of loading points worked by the same haulage engine and it is necessary for the trolleymen to travel between these loading levels for the purpose of assembling the sets.

There was a considerable increase in the number of accidents resulting from tubs being allowed to run uncontrolled, there being 41 in 1938, as compared with 28 in 1937. On tramming roads, a sufficient supply of suitable sprags and lockers should be provided and their use insisted on.

To prevent tubs running uncontrolled from the tops of haulage inclines due to the haulage attendants failing properly to operate the stop-blocks and runaway switches, it is suggested that the type of inter-coupled stop-block and runaway switch, as illustrated in Figure 2 be used at the tops of all haulage inclines where stop-blocks and runaway switches are required, as such an appliance would prevent accidents caused by the negligence of persons employed in operating stop-blocks and runaway switches at the tops of these inclines.

In the Annual Report for 1931, details of a suitable type of drag were given. A lighter and improved drag has been designed as a result of experiments carried out by Mr. N. Barraclough, Inspector of Mines, No. 1 Circle, and is shown in Figure 3. This type of drag has been found very effective in practice and its use is recommended.

There was the same number of accidents from hand tramming in 1938 as in 1937. Accidents resulting from hand tramming still form a large percentage of the total number of accidents on haulage roads and many of these accidents could be avoided by greater care on the part of the trammers.

There was an increase in the number of accidents from guiding tubs on curves, there being 8 in 1937 and 11 in 1938. Well laid and properly graded tracks with guide rails will minimise this type of accident.

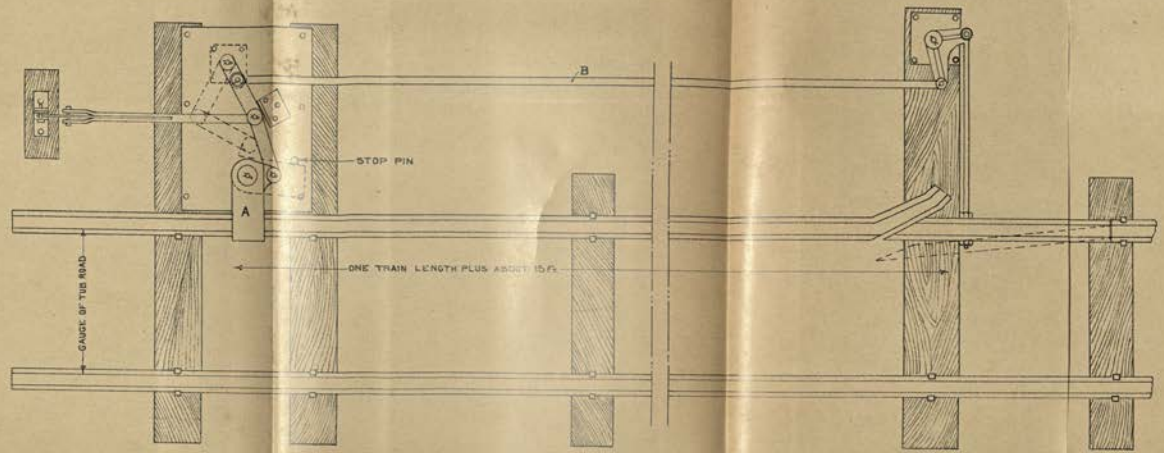
There were 63 accidents due to derailments or while re-railing tubs, as against 61 accidents in 1937. This type of accident could be greatly minimised by providing a well laid track with rails of as uitable section. It is not uncommon to see rails of different sections in the same haulage line with joints badly made and very little attention paid to the grading of the track, so that it is not surprising so many derailments occur.

For re-railing tubs suitable levers should be used so that, in addition to facilitating the re-railing of the tubs, the work can be done in greater safety.

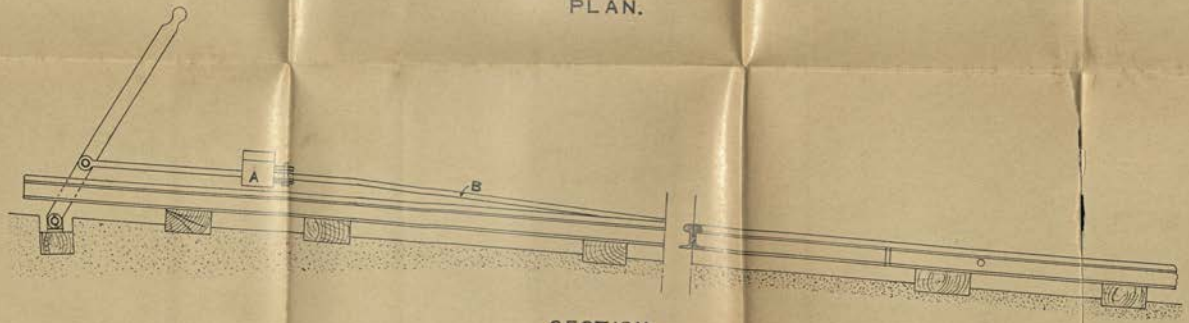
The number of accidents to persons while resting on or loitering about the haulage roads or tramming levels decreased from 27 in 1937 to 18 in 1938. In my Annual Report for 1937, the attention of owners, agents and managers was drawn to my Circular No. 4 of 1931, in the hope that the recommendations contained therein would be more rigidly enforced. Although there has been a reduction in this type of accident, a number of accidents which occurred during the year would have been prevented by stricter supervision on the part of the subordinate officials. In a number of cases it has been

FIGURE 2.

INTER — COUPLED STOP BLOCK AND RUNAWAY SWITCH.



PLAN.



SECTION.

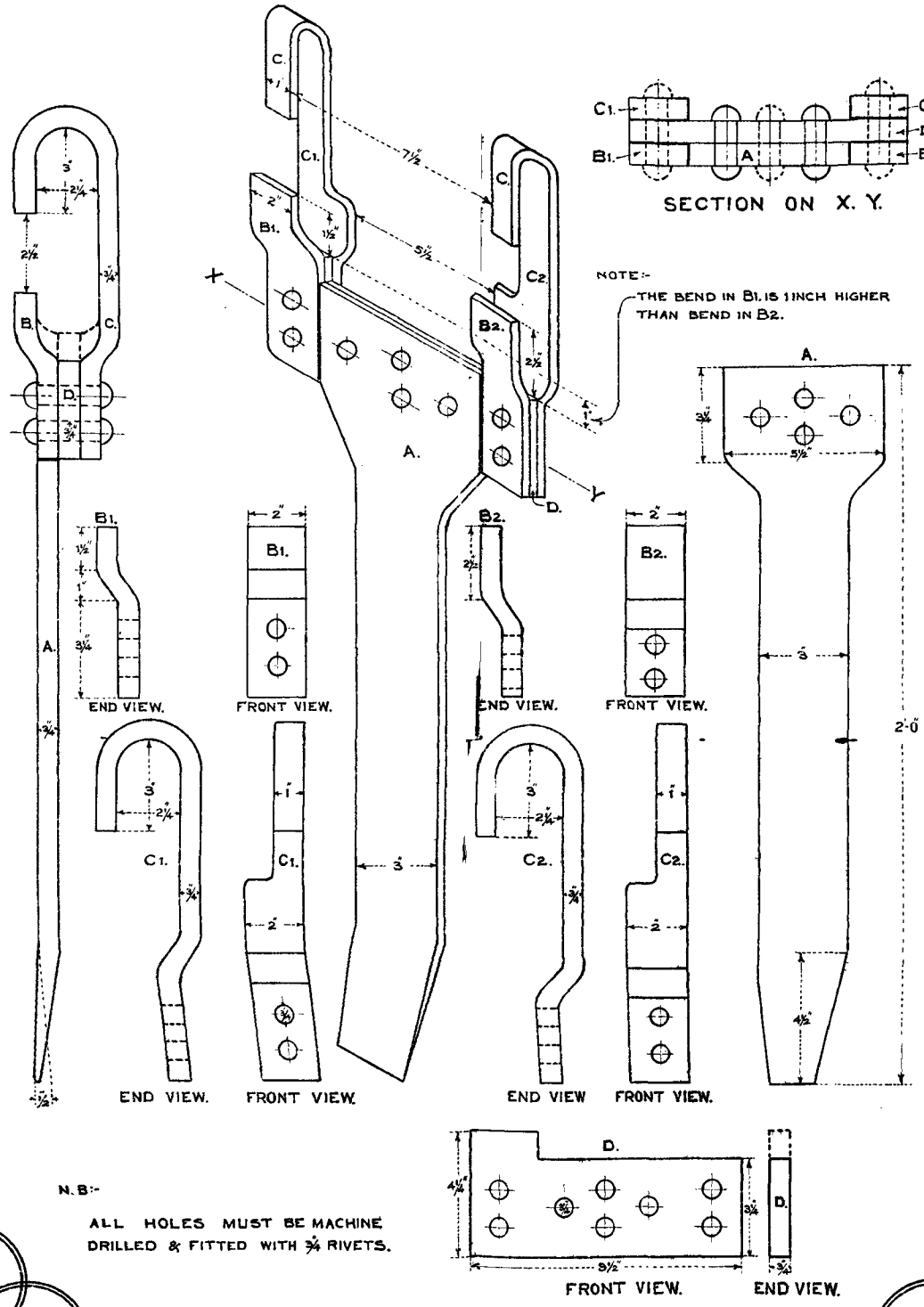
Reg. No. 2988 E'33-1275'39.

Vandyked at the Survey of India Offices, Calcutta.

FIGURE 3.

IMPROVED TYPE OF DRAG FOR PREVENTING RUNAWAYS ON INCLINES.

SCALE ¼ FULL SIZE.



N.B:-

ALL HOLES MUST BE MACHINE DRILLED & FITTED WITH ¾ RIVETS.

REG. No. 2988 E/33—1275'39.

Vandyked at the Survey of India Offices, Calcutta.

suggested that a fence or gate should be placed some distance along working levels to prevent persons going out on to the main haulage-roads. It is considered that this safeguard would be more effective in many cases than the "white line" as referred to in the above-mentioned circular.

Underground Machinery.—Two fatal and 28 serious accidents were caused by underground machinery.

Sundries Undergrounds.—Twenty-three fatal accidents and 339 serious accidents were due to miscellaneous causes underground.

Surface Machinery.—One fatal accident and 20 serious accidents were caused by surface machinery.

Surface Railways and Tramways.—Seventeen fatal accidents and 102 serious accidents took place on surface railways and tramways.

Electricity.—There were seven serious accidents attributable to the use of electricity.

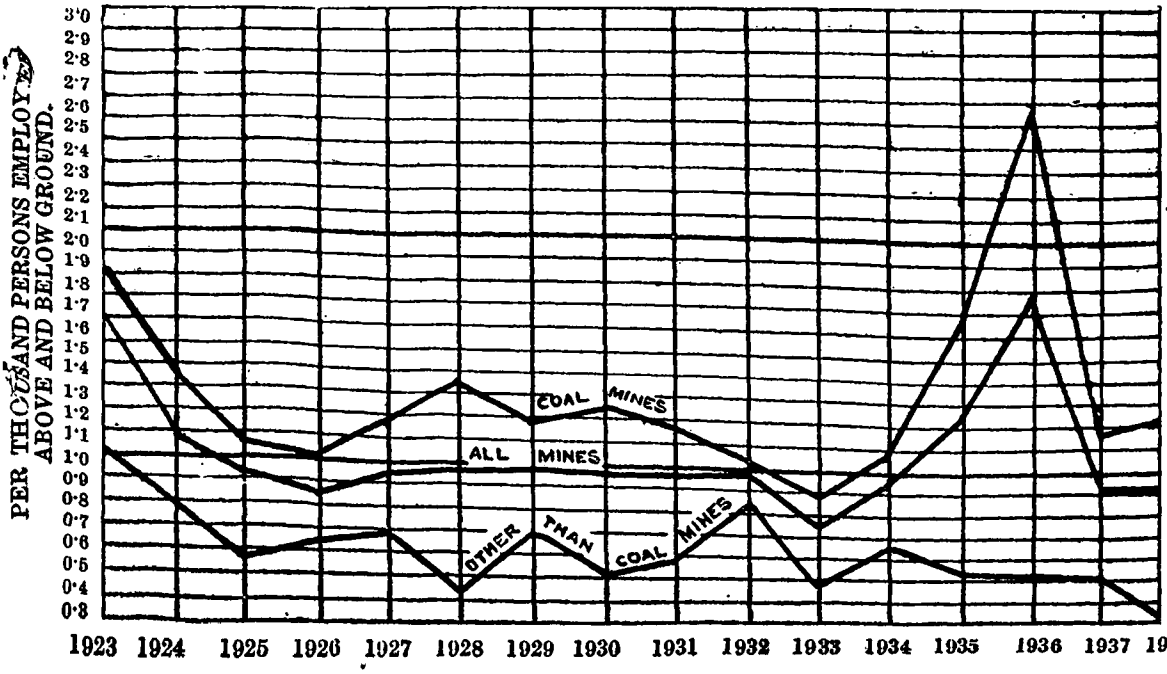
Miscellaneous on the Surface.—Six fatal accidents and 88 serious accidents of this kind took place on the surface.

Accidents excluded from the statistics.—Twenty-four accidents causing 24 deaths and injury to one person were excluded from the statistics for reasons which are given in Appendix II.

Death rates.—The death rate per thousand persons employed above and below ground was 0·92 which was less than the rates in 1936 and 1937. The average rate for the preceding five years was 1·12. At coal mines the rate was 1·23, as compared with 1·17 in 1937. At mines other than coal mines the rate was 0·33, as compared with 0·50 in 1937.

The chart below shows graphically the variations in the death rate during the period 1923-38—

CHART SHOWING THE DEATH RATE
FROM ACCIDENTS DURING THE PERIOD 1923-1938.



from the above it will be seen that the death rate with the exception of that for coal mines has fallen. The high death rate in 1936 was due chiefly to an explosion in a coal mine which caused the loss of 209 lives.

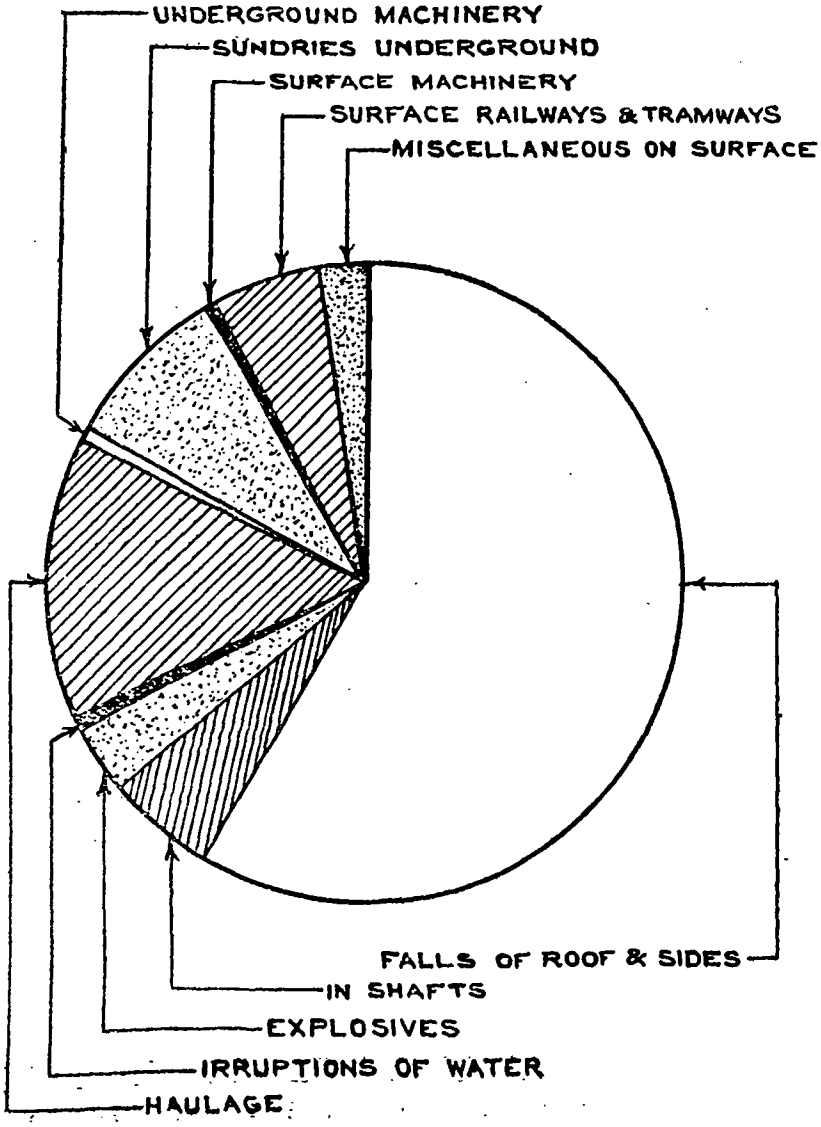
The death rate per million tons raised at coal mines was 9·81, while that of the preceding five years was 11·30.

Deaths occurring in each class of mines were as follows :—248 in coal mines; 4 in iron ore mines; 15 in mica mines; 4 in limestone mines; 2 in stone mines; 1 in a copper mine; 1 in a chromite ore mine; 2 in a china clay mine and 6 in manganese mines.

One hundred and four persons lost their lives by falls of roof; 62 by falls of sides; 15 in shafts; 10 by explosives; 2 by an irruption of water; 40 by haulage; 26 by other accidents underground; and 24 on the surface.

The accompanying chart shows the relative importance of the various cases of accidents in coal mines during 1938.

CHART SHOWING
DISTRIBUTION OF CAUSES OF PERSONS KILLED IN AND ABOUT COAL MINES IN THE YEAR 1938.



A list of the fatal accidents appears in Appendix II, Table 1, where each is briefly described. The details of certain accidents are reported at greater length as follows :—

Falls of Roof.

No. 9.—The Equitable Coal Company, Limited's Bejdih coal mine.

(Three persons killed.)

This accident occurred while roof coal was being taken down in a level in the Dishergarh seam, which is 15 feet thick and lies at a depth of 1600—1700 feet. Plan No. 1 shows the place of accident.

Where the accident occurred, the level was 26 feet wide and props had been set as indicated on the plan. The work of taking down the roof had been commenced by the first relay of miners, who were instructed to take down 2 feet of roof coal. Tubs had been placed on the dip side of the level and to load these tubs the loaders had to pass under the coal which was being taken down. During the first relay nothing untoward occurred, but shortly after the second relay commenced, miners and loaders were engaged at the place of accident, when a mass of roof coal, $24' \times 4' — 6'' \times 2'$, collapsed and displaced four props. Two miners were killed instantly by the falling coal and a third was fatally injured. The place had been inspected by the day shift assistant and by the second relay overman, who were satisfied that it was safe and that sufficient supports were set.

The manager considered that the fall of coal was due to a "bump" in the goaf, and there was a further severe "bump" during his inspection of the place after the accident. It is very probable that the "bump" caused the coal to fall from the "slip" on the dip side of the level. Since the accident the roof coal is being worked along the level in order to obviate workers passing beneath roof coal on which work is being done.

A similar accident, caused by a "bump", occurred in another district of the same mine about a month previous, and two persons were killed. As a result of these accidents, it was suggested by this department that in the vicinity of places where pillars are being extracted and particularly at loading points, the following precautions should be adopted :—

(*a*) Provision should be made for an adequate supply of substantial props and the generous use of supports for the roof and sides in all loading levels.

(*b*) The complete stowing of all galleries not required for traffic and ventilation within two pillar lengths of any pillar which is being extracted.

The agent stated that steps had been taken to give more supports in the levels, and to take down roof coal within one pillar length of pillars under extraction, and also to extract pillars as rapidly as possible once they were attacked. These precautions will, no doubt, make for safer working conditions.

No. 56.—The Dhemo Main Collieries Limited's Dhemo Main coal mine.

(Nine persons killed:)

The following description of the accident is given by Mr. G. S. Cameron, Inspector of Mines, No. 2 Circle, who enquired into the occurrence :—

" This accident occurred in the Dishergarh seam, which varies in thickness from 12 to 13 feet, and dips at about 1 in 5½. As shown in plans Nos. 2 and 3 the seam is overlain by a band of hard shaley sandstone, 6 feet thick, above which there is a layer of hard white sandstone, 12 feet in thickness.

A small goaf, approximately 300′×240′, had already been formed adjoining the place of accident, and at the time of occurrence, coal was being stripped off the side of the barrier, as indicated in the plan.

The accident occurred an hour before the termination of the second relay, which commenced at 3 p. m. and ended at 11 p. m. Just previous to the occurrence, the second relay sirdar had handed over charge to the relieving sirdar after going round the workings with him and explaining what work was in hand. The persons involved in this accident belonged to a gang of miners 27 in number, and of these, nine were engaged in stripping the barrier on the dip side of a level. Of the remaining miners, some were employed on a level above and six were working as loaders. The working place itself measured 57′×45′, owing to the fact that a quantity of coal had been cut from the barrier. The roof coal had been taken down to the entrance to the level, leaving the hard shaley sandstone roof exposed. On the dip side of the working place there was a bench of floor coal, 25 feet in length and 8 feet in width, on which the miners were working. When the second relay of workers had finished, no more coal was to be taken from the barrier and the third relay of miners were to be employed to cut away the bench of floor coal. This operation would, in all probability, have been finished by the end of the third relay and would have completed all the work that had to be done on that level. At about 10 p. m., while the nine miners were engaged in cutting coal from the barrier, a mass of stone, 57′×38′×3′, suddenly fell from the roof without warning, over-riding the props and a cog which was set under the loose end of stone adjacent to the goaf. All the nine miners were killed instantly.

An inspection of the scene of the accident disclosed that there was a very well defined " slip " running across the south east corner of the working place, while a less pronounced " slip " was exposed on the rise side of the place, running practically parallel to the pillar. It was also noticed, that the stone which was 3 feet in thickness, had come away from a clean " parting " in the roof.

The assistant, who had been in charge of the district for the last two years, stated that the props in the centre of the place were set 4 feet apart and staggered, and on the working bench there were two rows of short props 6½ feet in length and set the same distance apart. There were also two rows of props set under the loose end next the goaf, while in the centre of the place, between the two rows, there was a 4′×4′ timber cog. At the time this accident was investigated it was impossible to ascertain the amount of timber set as a good deal of the fallen stone required to be removed.

When the manager visited the place four days previous to the accident, he was quite satisfied with the conditions existing then. He stated that there was no " weight " on the place and that there had not been any " bumping " in that particular district. The assistant deposed that he visited the place of accident the day previous to the occurrence and found conditions normal and satisfactory. The sirdars in charge of the district found everything in order. The supervising staff was well experienced in depillaring work and the place was properly inspected in accordance with the regulations.

As to the cause of the accident, it would appear that there was no " weighting " from the adjoining small goaf which might have caused the fall. The main sandstone roof in the small goaf had fallen. It may, therefore, be reasonably assumed that no " weight " was being thrown on to the place of accident. It is considered that the fall was due to the abnormal roof conditions existing at the place of accident. In all probability there was a bending movement of the shaley sandstone at the loose end next to the goaf which drew the stone away from the two " slips ", at the same time over-riding the props. The presence of these two " slips " would not be apparent before the accident.

A similar fall had never previously occurred at this colliery, and there is no reason to doubt that the management considered the place to be adequately supported. Had the actual roof conditions been known to the management before, it is probable that they would either have abandoned the place or had it strongly supported by a number of cogs. It is extremely doubtful if a large number of props would have supported the weight of this mass of stone once it started moving. In their evidence, the miners who were out on the loading level, adjoining the place of accident, stated that the roof gave no warning whatsoever before it fell, and they all mentioned that the place was thickly " propped ".

In order to guard against a recurrence of this type of accident it was suggested, and the management agreed, that in all cases where a barrier is being stripped or where there is a large area of exposed roof in depillaring areas, the roof should be supported by cogs or chocks set at intervals not exceeding 15 feet, as such substantial supports are not likely to be overridden by any movement in the roof.

No. 57—The Mundalpur Coal Company, Limited's Mundalpur Coal Mine.

(Three persons killed and two injured.)

This accident occurred during depillaring operations in a seam 8½ feet thick, which dips at 1 in 12. Above the seam is a layer of hard sandstone 3 feet in thickness, above which is a band of shale 4" thick. The shale band is overlain by a layer of sandstone 3 to 4 feet in thickness. Depillaring had been in progress in this section, which lay between two faults, for about a month and the extraction of five pillars had been completed. Plan No. 4 indicates the place of accident.

On the morning of the occurrence, there had been a fall of roof in the goaf at about 8 a.m., but after that the day shift overman, who was in

charge of the district, said that everything was normal. At about 9-30 a.m. the overman put twelve miners to work in the section and instructed seven of them to commence work on the half pillar, as indicated on the plan. After the miners had started work, two timbermen arrived and commenced measuring props, which they were going to set on the curve of the tram line. Less than two hours later, a mass of sandstone, 40′×14′×3′, fell without any warning from the roof. One miner and the two timbermen were killed instantly, while two other miners were seriously injured.

The fallen roof exposed the fault on the rise side at the curve of the tram line, and a well-defined "slip" was also exposed on the level at the curve. Nine props were said to have been set in the working place, but these were all over-ridden and buried by the fallen roof.

It is considered that the fall was due to the proximity of the fault to the working place, and it is likely that the previous goaf-fall earlier in the day was a contributory factor in that it disturbed the strata. Apart from the first fall referred to, there had been no "bumping" or indications of "weight". The overman in charge of the district visited the place half-an-hour before the occurrence and was satisfied that everything was in order. The assistant also visited the place before the miners commenced work, and he was of the opinion that the place was safe and adequately timbered.

In order to guard against a similar occurrence, systematic timbering was introduced and the agent issued orders that in all depillaring areas in the vicinity of dykes or faults supports were to be set at the following intervals:—

(*a*) between each row of props, 4 feet,

(*b*) between adjacent props in the same row, 4 feet,

(*c*) between the front row of props and the face, 8 feet, and

(*d*) chocks or cogs to be set where necessary.

Falls of Sides.

No. 132.—Messrs. Chatturam Horilram Limited's Matuni Mica Mine.

(Four persons killed and three injured.)

This is an unusual type of accident and occurred in an excavation for mica, 16 feet deep. The following details of the accident are given by Mr. N. Barraclough, Inspector of Mines, No. 1 Circle, who enquired into the occurrence:—

"The mine was opened on 1st December 1938, and it consists of one small excavation about 40 feet long, 25 feet wide and 16 feet deep. The mica-bearing pegmatite vein is about 3 feet wide. It runs in a north-easterly direction and heades south-east at an angle of about 35 degrees to the vertical. The pegamite vein contains hard crystalline quartz and felspar and the hanging and foot-walls near the surface consist of soft decomposed schist. The pegamite vein outcrops on the surface but the soft schists on either side of it have been denuded and are covered with alluvium.

On the day of the accident about 25 work-persons were employed at the mine; four of them were engaged in operating a hand-pump and the remainder were excavating soft schist and removing the debris to a dump on the surface. Two of the deceased, Bain Singh and Dil Bahadur, car-driver and car-cleaner, respectively, who were servants of the mine-owners and who had been engaged during the day in repairing a motor car close to the mine, thought they would like to see the mine, before returning home. They stood on the edge of the excavation to watch operations and the side gave way, precipitating them into the quarry. As shown in plan No. 5 a mass of earth, 10 feet long, about 2½ feet wide and 2 to 5 feet high, which would weigh about 3½ tons, fell with them. Two pump attendants, who were standing on the platform near the pump, were also involved. The four deceased fell into the small sump at the bottom of the quarry which contained water, about 2 feet deep and were buried by the earth which fell. Three other labourers were also struck and severely injured. The "Incharge" and the mate with the help of others soon rescued the injured persons but the four deceased died from suffocation before they could be released.

The fall revealed a smooth inclined plane at the junction of the schist and earth which was covered with flakes of mica, the smooth plane extending from the bottom of the part which collapsed to within 2 feet of the surface. This smooth plane was the principal cause of the collapse of the side but the weight of the deceased car-driver and cleaner was also a contributing factor and there is no doubt that the accident would not have occurred if these two persons had not stood so close to the edge of the excavation."

The sides of the excavation were stepped and sloped, but the smooth inclined face covered with decomposed mica facilitated the fall of earth which caused the accident.

In Shafts (Whilst Descending by Machinery).

No. 140.—Messrs. Pure Dishergarh Colliery Company's Pure Dishergarh coal mine.

(One person killed.)

This accident occurred in a shaft, 185 feet deep, which was fitted with two cages. Each cage had a rigid gate at either end, consisting of three flat iron bars, 1½"×5/16", which moved up and down two rigid guides. When in position, these bars formed an effective barrier against persons falling from the cages while in motion.

Deceased and his three companions entered one of the cages, and the banksman closed the gate nearest to him, but he admitted failing to close the gate at the other end of the cage before the cage was lowered. While being lowered, the cage was suddenly stopped, when it was 15′ to 20′ from the shaft bottom, and deceased was thrown from the cage to the shaft bottom.

The banksman, who absconded immediately after the accident, violated Bye-law 82, which requires the cage gates to be in position and closed before the cage is signalled away.

During the year, there were three other fatal accidents due to persons falling from cages while riding in shafts. In one case, it was definitely proved that the cage gates were not closed, and although the evidence was very conflicting, it is very probable that the cage gates were not closed and caused the other two accidents.

This type of accident is easily preventable and is due to the negligence of the banksman or on-setter failing to comply with Bye-law 82. It is probable that there are frequent violations of this bye-law and it is requested that, in the event of managements detecting such contraventions, suitable action be taken against those concerned as will have a salutary effect.

HAULAGE.

No. 179.—The Kanhan Valley Coal Company, Limited's Damua coal mine.

(One person killed.)

This accident occurred on a haulage incline, dipping at 1 in 3. During the course of the investigation into this accident, it was disclosed that a banksman and a trammer were employed at the top of the incline to arrange the empty sets of tubs. A signal was received from underground to lower a set of empties. The banksman, finding that the haulage rope did not reach the empty set signalled to the engine driver to slacken off the rope so that it might be attached to the tubs. The engine driver was absent from the engine room and the banksman went to call him. While the banksman was away, the trammer, apparently thinking that the set was coupled together and attached to the rope, pushed a tub past the stop-block which had been left open over the brow of the incline, and the tub ran wild, striking deceased, who was engaged on the haulage line at the time.

After the accident, the manager examined the incline brow and found the runaway switch and stop-block in good working order. It transpired that the runaway switch had been deliberately jammed to save the banksman the trouble of opening and closing it.

This accident was obviously due to negligence on the part of the banksman and the trammer in not seeing that the tubs were properly coupled together; the haulage rope attached to the set, and that the runaway switch remained open until the stop-block had been opened and the set of tubs found to be securely attached to the rope. Proceedings were instituted against the banksman and the trammer. Inspite of so many mistakes committed by the human element, an inter-coupled stop-block and runaway switch would have prevented this accident and such appliances should be fixed at the top of all similar haulage inclines both on the surface and underground with a view to preventing this type of accident.

No. 198.—The Indian Iron and Steel Company, Limited's Chasnalla coal mine.

(One person killed.)

This accident occurred 200 feet to the dip of the main incline entrance. The following description of the accident is given by Mr. N. Barraclough, Inspector of Mines, No. 1 Circle, who enquired into the accident :—

" The incline entrance is some 200 feet from the brow of the incline and the runaway switch about 90 feet from the brow. The switch consists of a heavy section rail pivoted at its middle on a horizontal shaft and operated by a pull wire. The empty tubs formed the set, the tubs being coupled by strong " D " links with loose pins. Three hookmen worked on the brow of the incline and did the various operations collectively. The coupling between the third and fourth empty tubs was not properly attached and when the train was being pushed over the brow the first three empty tubs ran away. The hookman, Jadhu, became confused and held the runaway switch closed instead of releasing it or not operating it until he was sure that the set was properly coupled. The three tubs were derailed some distance down the incline and came to rest just below the place of accident.

Two haulage line attendants, deceased and Sohan Mia, who had been laying rails on " K " level of No. 3 incline had completed their work early and came out of the mine by the travelling road to " A " level. They saw that the haulage was not working and proceeded up the haulage road. As they travelled up the incline, Sohan heard the tubs running away and he stepped into a manhole. Deceased, who was behind him and midway between the two manholes, was unable to reach a manhole, and was struck and fatally injured by the runaway tubs.

The precautions against such accidents consisted of stopping the haulage during the changing of shifts. At " A " level, some 400 feet from the incline entrance, where the travelling road leaves the haulage road, there is a signalling station and it was customary to give a signal —one rap—from this point when men travelled through the haulage incline during the working period. Apparently, the two haulage line attendants passed this signal station and the signal was not given ".

The accident was due to mistakes made by the hookmen on the surface and it was considered that further precautionary measures were necessary. The Inspector of Mines, No. 1 Circle, recommended that the following measures should be taken in order to avoid a recurrence of this type of accident, due to mistakes made by the human element, and these precautions are quoted in the hope that similar measures will be adopted at all mines where similar haulage inclines are working :—

(1) An imter-coupled stop-block and runaway switch should be installed on the incline.

(2) An improved type of drag should be used.

(3) Where the travelling road meets the haulage road, a gate should be provided and the signalman at this point should not allow any person to travel on the haulage road until a special signal has been given and a reply has been received from the surface.

(4) A special signal of six raps should be used and a reply of six raps should be received from the surface before persons are allowed to travel on the haulage road.

Section IV.—Prosecutions and amendments to the Act, Regulations, rules and orders made thereunder.

Prosecutions.

During the year judgments in prosecutions were delivered as follows :—

The owner and manager of a coal mine in the Jharia coalfield were prosecuted for failing to have the entries in the register of employees made as required by the rules ; for failing to have a surface plan and also up to date plans of the underground workings, and for failing to fence disused underground galleries. They were fined Rs. 50 each.

The manager of a mica mine in the Hazaribagh district was prosecuted for employing the same miners underground in the mine for more than nine hours a day, and for failing to maintain a register of the employees. He was fined Rs. 20.

The owner, agent and manager of a mica mine in the Hazaribagh district were prosecuted for employing the same miners underground for more than nine hours a day ; for not maintaining a register of the employees ; and for failing to keep a plan of the underground workings of the mine. The owner was acquitted and the other two fined Rs. 50 each.

A trammer in a coal mine in the Raniganj coalfield was prosecuted for failing to sprag a tub and allowing it to run uncontrolled on an underground haulage road, with the result that the tub "ran wild" and fatally injured a loader. The case was withdrawn as the accused could not be traced.

The owner, who was also the manager of a coal mine in the Jharia coalfield, was prosecuted for extending galleries under a river without submitting the required notice ; for failing to keep some of the inclines on the surface properly fenced ; and for failing to fence disused underground galleries. He was fined Rs. 100.

The manager and attendance clerk of a coal mine in the Jharia coalfield were prosecuted, the manager for failing to have a correct register of persons working underground maintained and for failing to notify the appointment of a temporary sirdar ; the attendance clerk for not maintaining a correct register of persons working underground. The manager was fined Rs. 50, and the attendance clerk Rs. 20.

The agent and manager of a coal mine in the Jharia coalfield were prosecuted for failing to provide proper stationary lights at the bottom of a shaft ; for failing to keep in working order the runaway switch on an underground haulage road ; for failing to fence an incline securely at the surface ; for

failing to fence properly on the surface a subsided area; and for failing to provide proper manholes in a haulage road. The former was acquitted and the latter fined Rs. 100.

The attendance clerk of a coal mine in the Jharia coalfield was prosecuted for having entered the haulage engine room and interfered with the engine, without authority, causing serious bodily injury to a workman. He was fined Rs. 40.

The owner, manager and attendance clerk of a coal mine in the Jharia coalfield were prosecuted; the owner and manager for failing to maintain an up to date plan of the underground workings of the mine; for failing to arrange for the necessary underground inspections of the mine; and for failing to keep a number of inclines securely fenced; the attendance clerk for failing to maintain a correct record of the persons employed underground. The owner and manager were fined Rs. 30 each. The case against the attendance clerk was withdrawn.

The manager of a coal mine in the Raniganj coalfield was prosecuted for making false statements in five certificates issued by him to five persons to enable them to appear for the underground sirdars' examinations. He was acquitted.

Five persons referred to above were also prosecuted for obtaining false certificates and using them in order to obtain permission to appear at the underground sirdars' examination. Three of the accused were acquitted and two could not be traced.

For obtaining a false certificate in order to obtain permission to appear at the underground sirdars' examination, an employee of a coal mine in the Jharia coalfield was prosecuted. He was sentenced to six weeks' rigorous imprisonment and a fine of Rs. 30.

The manager and assistant storekeeper of a coal mine in the Jharia coalfield were prosecuted. The former for issuing a false certificate and the latter for making use of it in order to be permitted to appear for the sirdars' examination. They were fined Rs. 50 each.

Four employees of a coal mine in the Jharia coalfield were prosecuted for "robbing" coal from the side of a loading level which was not the working place allotted to them, and causing an accident in which one person was killed. Three of them were convicted and each sentenced to three months' rigorous imprisonment; the fourth could not be traced.

The owner, contractor and manager of a fireclay mine in the Jharia coalfield were prosecuted for failing to maintain a register of work-persons; for failing to keep the requisite medicines and ambulance appliances at a convenient place on the surface; and for failing to fence several disused quarries. The owner was fined Rs. 50, the contractor Rs. 25, and the manager Rs. 40.

Eight employees of a coal mine in the Raniganj coalfield were prosecuted for endangering life by a negligent and wilful act for damaging and improperly interfering with materials used in the workings of the mines; and for throwing stones and other missiles about the mine with the intention of causing injury. Judgment has not yet been received.

The owner and the manager of a fireclay mine in the Jharia coalfield were prosecuted for failing to fence several disused quarries. For the same offence they were prosecuted previously. The owner was fined Rs. 50, and the manager Rs. 40.

The owners (four) of a coal mine in the Jharia coalfield were prosecuted for allowing the coal from pillars to be "robbed" thereby making the galleries wide and the pillars too small. They were fined Rs. 20 each.

The owners (two), one of whom was also the manager, of a coal mine in the Raniganj coalfield, were prosecuted for failing to keep the sides of a quarry sloped, or secured in such a manner so as to prevent danger from falls of material, with the result that a fatal accident occurred. The owner-manager was fined Rs. 45.

The manager and an attendance clerk of a coal mine in the Raniganj coalfield were prosecuted; the manager for employing miners underground for more than the stipulated number of hours; and the attendance clerk for falsifying the attendance register of the persons actually employed underground. They were fined Rs. 50 each.

The acting manager and a sirdar of a coal mine in the Jharia coalfield were prosecuted for allowing women underground in the mine. The former was fined Rs. 75 and the latter Rs. 25.

The manager and an overman of a mica mine in the Hazaribagh district were prosecuted for failing to remove the overburden and make the sides of the open workings secure, as a result of which an accident occurred and three persons lost their lives and one was seriously injured. The case was withdrawn as neither of the accused could be traced.

Three prosecutions were instituted against an agent and two owners for failing to submit annual returns. The agent was fined Rs. 10 and one of the owners Rs. 25; the other owner could not be traced.

Information was received of the following prosecutions instituted by mine officials against subordinate staff.

A banksman and a trammer of a coal mine in the Pench Valley coalfield were prosecuted. The banksman for leaving his appointed working place; and for not keeping the stop-block and runaway switch in proper order; and the trammer for pushing a loaded tub past the stop-block and over the brow of the incline. The case against the former was not proceeded with. The latter was fined Rs. 30.

A miner of a coal mine in the Raniganj coalfield was prosecuted for leaving his working place and for entering a fenced off area to extract fallen coal. The case was withdrawn as the accused could not be traced.

The "in charge" of a shunting yard of a coal mine in the Pench Valley coalfield was prosecuted for giving orders contrary to instructions, which resulted in two locomotives colliding in a surface cutting, thereby causing a fatal accident. The case has not yet been disposed of.

A trammer of a coal mine in the Pench Valley coalfield was prosecuted for detaching a haulage rope from a set of full tubs and not taking steps to prevent the tubs "running wild" and endangering workers. He was fined Rs. 5.

A shot-firer of a coal mine in the Pench Valley coalfield was prosecuted for having in his possession more than the permitted amount of explosives and for issuing explosives to unauthorised persons. He was fined Rs. 4.

An underground trammer of a coal mine in the Pench Valley coalfield was prosecuted for riding on tubs without authority. He was fined Rs. 10.

For the same offence a trammer in one case and three trammers in another case were prosecuted and fined Rs. 10, Rs. 10, Rs. 5 and Rs. 5, respectively.

A shot-firer of a coal mine in the Pench Valley coalfield was prosecuted for being in possession of more than the permitted amount of explosive. He was fined Rs. 3.

A shot-firer of a coal mine in the Pench Valley coalfield was prosecuted for issuing explosives to miners. He was fined Rs. 5.

Amendments to the Indian Mines Act and to the Regulations, Rules and Bye-laws made under the Act.

In supersession of the notification of the Government of India, in the late Department of Industries and Labour, dated the 1st October 1935, the Central Government, in Notification No. M-1051, dated the 20th January 1938, exempted certain mines, groups of mines, classes of mines, parts of mines and classes of persons specified in the Schedule to this notification from the operations of the Indian Mines Act, 1923. The notification is reproduced in Appendix IV, Statement No. 3.

In Notification No. M-1028(1), dated the 22nd February 1938, the Central Government directed that certain amendments shall be made in the Indian Oil Mines Regulations, 1933. The notification is reproduced in Appendix IV, Statement No. 4.

In Notification No. M-1028(2), dated the 22nd February 1938, the Central Government directed that the Lanywa Oil Mine Regulations, 1933, shall be cancelled.

In Notification No. M-1028(1), dated the 23rd March 1938, the Central Government directed that certain further amendments shall be made with effect from the 1st April 1938, in the Indian Coal Mines Regulations, 1926. The notification is reproduced in Appendix IV, Statement No. 5.

In Notification No. M-1028(2), dated the 23rd March 1938, the Central Government directed that certain further amendments shall be made with effect from the 1st April 1938, in the Indian Metalliferous Mines Regulations, 1926. The notification is reproduced in Appendix IV, Statement No. 6.

In Notification No. M-955, dated the 20th May 1938, the Central Government directed that certain further amendments shall be made in the Indian Coal Mines Regulations, 1926. The notification is reproduced in Appendix IV, Statement No. 7.

Certain amendments in the conduct of examinations for Colliery Managers' and Surveyors' Certificates of Competency made by the Board of Examiners under Regulation 31(4) of the Indian Coal Mines Regulations, 1926, were published. They are reproduced in Appendix IV, Statement No. 8.

In Notification No. M-955(1), dated the 7th June 1938, the Central Government directed that the Supplementary Coal Mines (Temporary) Regulations, 1936, and the Coal Mines (Temporary) Regulations, 1937, shall be cancelled.

In Notification No. M-955(2), dated the 7th June 1938, the Central Government directed that the following amendments shall be made in the Supplementary Coal Mines (Temporary) Regulations, 1937, namely :—

In the said Regulations, regulations 6, 7 and 8 shall be omitted.

Rules for the conduct of examinations for Underground short-firers' certificates made by the Board of Examiners under Regulation 31(4) of the Indian Coal Mines Regulations, 1926, were published. They are reproduced in Appendix IV, Statement No. 9.

In Notification Nos. M-1055(1) and M-1055(2), dated the 24th August 1938, the Central Government constituted for the province of Bihar, Mining Boards for coal mines and mines other than coal and directed that the Boards shall consist of the persons whose names are reproduced in Appendix IV, Statements Nos. 10 and 11.

In Notification No. M-1268, dated the 31st August 1938, the Central Government applied to Berar the Indian Metalliferous Mines Regulations, 1926, subject to such amendments as are in force in British India or may be made in the said Regulations from time to time.

In Notification No. M-1051, dated the 6th December 1938, the Central Government directed that the following amendment shall be made in the Notification of the Government of India, in the Department of Labour, No. M-1051, dated the 20th January 1938, namely:—

"In appendix I to the Schedule annexed to the said notification, under the head "Central Provinces and Berar" to the entries under the sub-head "Stone mines", the following entry shall be added, namely :—

6. Salbardi Paras. Dula Khan. Salbardi, Multai. Betul."

By the end of the year bye-laws under Section 32 of the Act had been established at six hundred and twenty seven coal mines and twenty two mines other than coal. Amended bye-laws had been established at four hundred and fifteen coal mines. Bye-laws for the treatment of coal-dust had also been established at forty-six coal mines.

During the year four circular letters were issued to owners, agents and managers of coal mines. They are reproduced in Appendix IV, Statements Nos. 12 to 15.

Section V.—General Remarks.

Underground Fires.

Reference was made in my last report to the precautionary measures taken at the Khas Jharia group of mines to prevent the spread of fire in the vicinity of the Jharia town and the Jharia-Pathardih main line of the East Indian Railway, and to the protective works made at the Kusunda

group of mines to stabilise the Kari River due to an area of old workings being on fire beneath and in the vicinity of the river. At the Khas Jharia group of mines "blanketting" was continued and boreholes, through which sand was flushed, put down into old galleries adjoining the Jharia-Pathardih main line of the East Indian Railway. The protective work in connection with the railway was under the supervision of the Mining Advisor to the East Indian Railway. At the Kari River "blanketting" was continued by several large concerns, which undertook these protective works at great cost. On re-opening some of the 69 boreholes in the bed of the river it was found that no more material could be flushed down them and it is anticipated that the stowing under and in the vicinity of the river is nearing completion. The success so far attained in making these protective works at the Kari River is in a large measure due to the constant supervision by the management of Bhuggutdih Colliery, owned by the Bengal Nagpur Coal Company, Limited.

Recovery of Poidih Colliery belonging to the Bengal Coal Company, Limited.

After the disastrous explosion at Poidih Colliery on the 18th December 1936, resulting in the death of 209 persons, the mine remained sealed for eighteen months. Details of this accident are given in my Report for the year 1936.

On the 27th May 1938, I was informed that recovery operations would be commenced on the 4th July 1938, and a scheme was submitted by the Chief Mining Engineer of the Bengal Coal Company, Limited, which was duly approved. During June 1938, the headgears, electric winders, fan, etc., were put into working order. A brief description of the recovery operations is as follows :—

The first operation was to clear the mine of noxious and inflammable gases. Samples taken from the pipe in No. 1 shaft seal during May, on analysis, were found to contain 81 per cent. CH_4, 0·5 per cent. oxygen, and 2·3 per cent. carbon dioxide, the remainder being probably nitrogen. Previous to the fan being started up a small door, 5′—6″×3′—0″, was built into the side of the fan drift. This door was constructed in three sections, each of which could be opened and closed independently of the others. Its object was to admit pure air into the fan drift and so dilute the highly concentrated accumulation of inflammable gas in the shafts and workings. The fan was started up on the 1st July, and was run satisfactorily for three days. With the special door in the fan drift open 45,000 to 50,000 c.ft. of air per minute passed into the fan drift. On the 4th July, as arranged, a 9″×9″ opening was made in the brick stopping in the fan drift. The relief pipe in the upcast was sealed with a blank flange and the relief pipe in the downcast shaft was opened out and found to be downcasting. An analysis of the air in the fan drift was made continuously and it was found that with an opening, 18″×12″, in the fan drift stopping the percentage of inflammable gas was 3½. This was considered to be too high and the opening was reduced in size until a steady 2 per cent. of gas was obtained. On 5th July, another small hole was made in the stopping and an analysis of the gas actually issuing from the upcast shaft showed

59 per cent. CH_4, 8 per cent. oxygen and 1 per cent. CO_2. The seal at the downcast shaft top was broken and an opening approximately, 8′×1′, was made by moving the steel plates apart. On the 6th July, the openings in the stopping were slightly enlarged and with two openings, 9″×9″, there was a steady 2½ per cent. of gas in the fan drift. On the 7th July, the openings were further enlarged and the same evening the brick stopping was entirely removed. The steel door in the fan drift was then gradually closed section by section and the covering of the downcast shaft was also completely removed. The quantity of air circulating then rose to 110,000 c.ft. per minute, the gas percentage being steady at 0·40. The fan was run continuously on the 8th July, and the gas percentage varied from 0·4 to 0·35, and the quantity of air passing rose to 147,000 c.ft. per minute. On the 9th July, the ventilation quantities remained constant at 145,000 c.ft. per minute and the gas percentage was 0·25. As these conditions indicated that the ventilation in the downcast shaft bottom and for some distance from it was good, it was decided to make a preliminary examination of the downcast shaft on the afternoon of 10th July. During the above operations the air-lock at the upcast shaft was also put into working order by removing the brick stopping. The seal at the top of the upcast shaft was also partly removed so that work could be commenced on building the permanent air-lock. The gas percentage in the fan drift was determined both by a safety lamp and by a McLuckie gas detector. On the afternoon of 10th July, as arranged, and after a sinking bucket had been run up and down the downcast shaft several times, a party of three persons descended as far as the Burra Dhemo seam, dressing the sides as they went. A further examination of the shaft was then made as far as the shaft bottom. Air was found to be circulating freely along the shaft levels, and there was no trace of gas on the main east level until the third cross-cut between the intake and the return was reached. On the west side the air was fresh as far as the main west deep cross-cut. In the main return the air was fresh and no firedamp could be detected with a safety lamp at the upcast shaft bottom. On the following morning the work of erecting brattice cloth stoppings between the intake and return shaft levels was commenced. This cleared the gas on the east side for some distance, but in the rise itself there was still a large percentage of inflammable gas in the air. On the west side an examination was made of the main west cross-cut dip haulage as far as the third level. The two large goaves to the dip of the shafts were both found to be full of water and the stoppings blown inward towards the goaf. The work of bratticing down the main west cross-cut in order to restore the ventilation was then continued, and at the same time, steps were taken to clear the downcast shaft bottom, while on the surface preparations were made to remove the damaged guide ropes. By the 13th July, ventilation had been restored on the west side of the mine, and a complete inspection was made of the west dip goaf. This was found to be sealed by water. The west side having been cleared of gas, bratticing work was concentrated on the east side and at the same time work was continued in the shaft bottom. New cages were duly fitted in the downcast shaft and were running by the 25th July. The work of bratticing the east rise district was completed and ventilation restored by the 31st July. Meanwhile, the building of the air-lock at the upcast shaft had been commenced and the cage which was resting on the keps was removed. A sinking bucket was installed,

thus establishing a second outlet for the mine. This shaft on examination was found to be in good order. The work of building permanent stoppings was then commenced, and these (70 in all) were completed by the 21st October. At this time the quantity of air circulating was 110,000 c.ft. per minute. This quantity was found to be adequate both in the east rise and west dip district although only brattice sheets were hung to course the air current. It is to be noted that the men employed in building the permanent stoppings worked in fresh air all the time and under fairly comfortable conditions.

It is not proposed to discuss here the cause of the explosion, or the point of origin, except that a thorough examination revealed indications of indescribable violence, as a complete report concerning conditions disclosed after the accident is being prepared. All stoppings with the exception of two were destroyed. Many were blown with great violence against barriers and the bricks pulverised. It can also be stated definitely that all persons employed in the mine met their deaths by violence and were killed instantly. All the bodies were recovered. It may, therefore, be safely concluded that every person in the pit was killed outright by the explosive blast, and that whatever rescue means could have been adopted at the time no lives could have been saved.

It may be mentioned that a thorough examination by the Electric Inspector of Mines of all electrical apparatus in use at the time of the explosion revealed nothing defective.

Since the mine has been recovered all galleries have been systematically cleaned and stone-dusted, while main haulage roads and the shaft bottoms have been white-washed and electrically illuminated.

The scheme adopted for the recovery of the mine proved sound in practice, and enabled operations to be completed in the minimum time.

In conclusion, I should like to add that great credit is due to the Chief Mining Engineer and those members of his staff who took part in these operations for the workmanlike and efficient manner in which the scheme was brought to a very successful conclusion.

Examination and Certification of Underground Shot-firers.

As pointed out in my last Annual Report, the report of the Coal Mining Committee was published in 1937, and action has already been taken on a number of recommendations made by the Committee. One of the recommendations was to the effect that shot-firers should be certificated by examinations after two years' practical experience underground, of which at least six months should be experience in connection with shot-firing, and that all shot-firers should be required to obtain this certificate after examination within two years from the date on which the regulation comes into force.

To give effect to this recommendation, Regulation 108 (3) of the Indian Coal Mines Regulations, 1926, published by the Government of India, Department of Labour, in Notification No. M-955, dated the 20th May 1938, provides that with effect from 1st April 1940, no person shall be appointed as a shot-firer unless he holds a shot-firer's certificate or a sirdar's certificate in accordance with this regulation. For the conduct of these examinations the

Board of examiners, under Regulation 31(4) of the above regulations, have prepared rules for the purpose of these examinations and arrangements are being made to hold these examinations in the various coalfields with a view to giving an opportunity to all existing shot-firers to qualify themselves for the necessary certificates before the 1st April 1940.

Edward Medal for Bravery in Mines.

At an investiture durbar held at Government House, Patna, on 25th February 1939, His Excellency the Governor of Bihar presented the Edward Medal to Mr. Theodore George Barker for saving the lives of two miners at Kustore colliery, belonging to the Raneegunge Coal Association, Limited, and situated in the Jharia coalfield in the province of Bihar. The facts of the case are briefly as follows:—

"The extraction of a pillar of coal in a seam, 12 feet thick, was being carried out. The roof in the area from which coal was being extracted was supported on props. At about 8 p.m. on the 20th October 1937, the roof began to show signs of "weighting" and the overman in charge of the work withdrew the miners. He then decided to withdraw the props to allow the roof to 'cave' in. There were thirty-four props in the place. Eight props had been withdrawn when a mass of roof stone, $40' \times 10' \times 3\frac{1}{2}'$ thick, suddenly collapsed, burying two of the men engaged in withdrawing the props. The agent, the manager and the assistant manager were informed and they proceeded to the place of accident.

Attempts were being made to recover the bodies of the two men when a second large fall occurred and in this fall a timberman, Akal Tanti, and a helper, named Bhima, were trapped. Bhima was almost completely covered by small debris and Akal Tanti was buried from the hips downwards. Bhima who was nearer the outer edge of the fall was rescued within about half an hour. The work of rescuing Bhima was done personally by Mr. Barker, the Assistant Manager, at great risk to himself.

The rescue of the second man, Akal Tanti, took much longer as he had been caught farther in the fall and by larger pieces of stone. Attempts were made to pull Akal Tanti out but he was held too tightly by the fallen stones. Above Akal Tanti there was a large mass of stone, about $15' \times 12' \times 3\frac{1}{2}'$ thick, which had parted from the roof above and was insecurely supported on three props. Two or three additional props were set under this stone. As the roof was treacherous and small pieces of stone were falling from time to time a timber cage was built round Akal Tanti's body and above his head. This work was done personally by Mr. Barker, who then proceeded to break up the stone that was holding the man. Mr. Barker continued the work until the man was rescued at 4 a.m. Altogether, the work of rescuing the two men took about two hours and 45 minutes. Both the men who were rescued have fully recovered and have no permanent injuries."

The manner in which Mr. T. G. Barker behaved was worthy of the highest traditions of the mining profession, and His Majesty the King Emperor was graciously pleased to award the Edward Medal to him in recognition of his gallantry on the occasion of the above-quoted accident.

In addition, the Government of India greatly appreciated the gallantry displayed by Jhari Baree, a mistry, and Tukin, a stone cutter, who at great risk to their own persons helped Mr. Barker in the rescue work for a considerable part of the time during which he was engaged in it, and for their gallantry, the Government of India were pleased to grant them each a certificate.

Health and Sanitation.

The Asansol Mines Board of Health held four special and twelve ordinary meetings during the year. Dr. L. Sen was Chief Sanitary Officer of the Board throughout the year. The birth-rate has been steadily on the increase since 1936. The progressive decrease in the death-rate was not maintained during the year owing to the prevalence of bacillary dysentery and enteric fevers during the rainy season and the recrudescence of malaria which was generally prevalent in many parts of Bengal during the latter half of 1938. Bye-laws empowering the Board to declare dangerous epidemic diseases like dysentery, enteric fevers, diptheria, etc., are still awaiting the sanction of the Government of Bengal. The colliery population enjoyed better health than the general population. The mortality rate among miners was considerably below that of the Mining Settlement as a whole throughout the year. The mortality rate among the resident mining population fluctuated from 10·1 per 1,000 to 19·6 per 1,000 against a variation between 17·3 and 25·9 per 1,000 in the general population. Sickness among the miners was at the lowest level in January and February and reached the maximum in July and August, declining again towards the end of the year. The medical arrangements that exist at collieries were overhauled—the unqualified doctors being replaced by registered practitioners. Indoor beds have also been provided at many collieries. The year was comparatively free from epidemic outbreaks of cholera. Out of 387 attacks from cholera 142 cases were reported from collieries, 37 from municipal towns and 208 from rural areas. The incidence rate in collieries was 2·02 per 1,000, while that in villages was 0·78. The higher incidence in collieries was due to migration of labour from outside the Mining Settlement and the constant movement of labour from mine to mine in search of work. Adequate control was maintained by measures taken under the Cholera Regulations. The total number of persons inoculated was 35,382, of whom 15,723 represented colliery population. Only 87 cases of small-pox were reported during the year. The steady effort made during the last few years to keep the population of the Mining Settlement (382,000) protected by mass re-vaccination has been effective in controlling the infection. The total number of re-vaccinations during the last five years was 308,777, while children and adults primarily vaccinated numbered 77,086. The provisions of the small-pox Regulations were enforced where found necessary.

The number of maternity and infant welfare centres maintained by the Board of Health was increased from seven to nine—each in charge of a Health Visitor. 235 infants and 136 toddlers attended the morning clinics at these centres. Out of 121 dais trained during the year, 90 appeared in the annual examination conducted by a Board of Examiners and 69 received certificates. 1,494 cases of confinements were attended by trained dais and 127 by Health Visitors either alone or with a dai.

A welfare centre was opened during the year in Raniganj town by the Asansol Health and Baby Welfare Society. Messrs. MacNeil & Company, Managing Agents of a group of collieries, opened three welfare centres, in charge of trained nurses, to look after the health and welfare of women and children. Sewing and other classes and baby clinics were the special features of these centres.

The activities of the annual Baby Week organised by the Welfare Society included a Health Exhibition, Baby Show and competitions in first-aid, home-nursing, mother-craft and health study which were preceded by a special course of training. The inter-colliery ambulance competition was held to encourage training and re-training in first-aid and ambulance work. The senior competition was confined to holders of the St. John Ambulance Certificate, while non-certificate-holders, including miners and non-miners, appeared in the junior competitions. There was a separate competition for school boys.

The number of Leprosy officers was increased from four to five and thirteen trained assistants were in charge of survey, propaganda and home-visiting. The annual Leper Day, organised by the Leprosy Relief Association, met with increasing response, the total collection having been Rs. 14,988, as against Rs. 11,330 in 1937. Arrangements have been made to construct a leper settlement near Asansol to segregate the leper beggars and the highly infectious cases from collieries and villages. The re-survey made during the year revealed an incidence rate of leprosy of 1·6 per cent. among the general population and 2·3 per cent. among the students of primary schools. 127 leper beggars were detected in course of a special survey, of whom 57 were in the infectious stage of leprosy. 2,990 cases were registered for treatment in 14 clinics out of 5,619 cases detected. As a result of treatment, 89 patients were discharged cured, 138 were declared symptom-free and 40, who were infectious, became non-infectious.

The Board carried out intensive anti-malaria-operations in four malarious areas. A partial campaign was undertaken in six other areas with a view to stimulate and supplement local effort by the residents themselves. The campaign included pre-epidemic cleaning out of tanks, treatment of breeding places by spraying and abolition where possible. Inoculation of private wells with a local larvicide fish—Dankona—has met with considerable success.

The Board carried out a Tuberculosis survey for a period of six months among a group of miners and also retired miners with a view to finding out the incidence of Tuberculosis infection and manifestation of the disease. A boys' school and a girls' school were also included in the survey.

During the year the Jharia Mines Board of Health held nine ordinary, nine special meetings and one joint meeting with the Jharia water Board. The estimated population of the settlement was 561,090 persons. The death rate was 16·33 per thousand, as compared with 16·50 in the previous year. There were 86 cases of suspected cholera with 30 deaths, as compared with 27 cases with 14 deaths in the previous year. The number of deaths on collieries from cholera was 5, as compared with 9 in the previous year. The total number of anti-cholera inoculations performed was 10,232. During the year, there were 378 cases of suspected small-pox with 19 deaths,

as compared with 418 cases with 6 deaths in the previous year. Four hundred and fifty-four samples of food were analysed in the Board's laboratory and prosecutions were ordered in all cases of adulteration. The five years' housing programme, enforced by the Board last year, continued during the year. Subjects chosen for propaganda work were leprosy, maternity and child welfare, general hygiene, sanitation, dietetics, vitamins and temperance.

As in previous years, all leprosy relief work continued to be managed by the Dhanbad and District Leprosy Relief Fund which organised a leper day on the 5th March 1938, and was successful in raising Rs. 9,125 on the occasion. The District Board, the Dhanbad Municipality and the Jharia Mines Board of Health continued their annual grants during the year. One new clinic was open at Telmucho on the 4th May 1938, making a total number of five clinics. Dr. M. Wardman, Chief Leprosy Officer, resigned her post on the 10th October 1938, and Dr. D. Mukherjee was appointed to act as Chief Leprosy Officer for six months. During the year 704 new patients were treated in the different clinics, the total number of treatments given being 30,259.

The Jharia water Board continued to function throughout the year. The total quantity of water supplied throughout the supply area during the year 1938, was 535 million gallons as under :—

	Gallons.
1. Collieries	443,110,000
2. Non-colliery premises (domestic and non-domestic supply)	37,960,000
3. Bazars of Jharia, Katras and Kirkend, and other places supplied free through standposts	54,020,000
Total .	535,090,000

Inspections Made by Medical Officers as ex-officio Inspectors of Mines.

During the year many reports were received from provincial and district Medical Officers of Health concerning health and sanitation. All the reports were dealt with and most of the recommendations were carried out.

Statistics of Rainfall.

Statistics of rainfall in the eastern coalfields have been recorded as follows :—

	Rainfall in inches.	
	1938.	1937.
Jharia Coalfield—		
Jealgora	51·24	49·37
Topchanchi	36·34	56·18
Raniganj Coalfield—		
Asansol	47·87	56·53
Dishergarh	53·59	58·93
Giridih Coalfield—		
Giridih	52·25	60·75

During the year the rainfall in the catchment area at Topchanchi was exceptionally low. The total rainfall for the year was 36·34 inches only against 56·18 inches in the year 1937. This rainfall is the lowest on record since Topchanchi reservoir was used as a water supply for the Jharia coalfield. Apart from being low, the rainfall was so irregular that much of the water was lost by percolation and evaporation. As a result, the Topchanchi water level was 13′-7½″ below the overflow level by the end of the rains, whereas it should have been near the overflow mark for a normal rainfall. As this shortage represented about a 50 per cent. reduction in the storage of water, various means for preventing wastage by leakage were adopted, and in addition, a scheme for augmenting the supply from pit water at Kustore colliery, at an estimated cost of Rs. 30,000, had to be undertaken by the Board.

Ambulance Work.

Classes in first-aid were held at nineteen centres in the Jharia coalfield and also in the mining areas of Gaya, Ranchi and Sambalpur districts in the provinces of Bihar and Orissa. Three hundred and sixteen candidates attended these classes and 257 certificates were awarded.

A centre of the St. John Ambulance Association was started in the Jharia coalfield in the year 1922, and up to the end of 1937, no less than 2,650 certificates in first-aid had been granted to colliery employees. The work of this centre was organised by the Chief Inspector of Mines as President and the major part of the administrative work fell on the Inspector of Mines, No. 1 Circle, as Honorary Secretary. On the 2nd August Col. H. Stott, O.B.E., M.D., F.R.C.P., D.P.H., I.M.S., Inspector General of Civil Hospitals, Bihar, and Chairman of the Bihar Provincial Centre of the St. John Ambulance Association, visited Dhanbad and a meeting with certain colliery owners and agents was arranged. At this meeting it was decided to re-organise the centre, and on the 15th August a general meeting was convened when a committee and an executive committee were elected. The centre has since been transferred from Bengal to the Bihar provincial centre and a warrant of constitution has been granted to it by the Indian Council of the St. John Ambulance Association.

In the Raniganj Coalfield, similar classes were held at eight centres. One hundred and sixty-seven candidates attended these classes and 118 were awarded certificates. A St. John's Ambulance Shield was competed for among teams from various collieries in the Raniganj coalfield. The shield was won by the Samla Kendra colliery team (Messrs. Martin & Company) and the runners up were Sodepur Nos. 9 and 10 pits team (Messrs. Bengal Coal Company, Limited).

The Lang-Cunningham Memorial Shield which is competed for among teams, the members of which do not hold first aid certificates, was won by a team from the Neamutpur workshop (Messrs. Equitable Coal Company, Limited), the runners up being a team from Pretoria colliery (Messrs. Shibpur Coal Company, Limited). The object of this competition was to stimulate interest among the more illiterate workers. Both these competitions were held at Asansol during the Health Exhibition Week, and created much interest among the general public.

I wish to express my appreciation of the valuable work done by lecturers and examiners in the two major coalfields and other mining districts.

Mining Boards in Bengal, Bihar and the Central Provinces.

The Bengal Mining Board held one meeting during the year. Among the subjects discussed at the meeting and by correspondence were:—(*a*) exemption of certain mines from the operation of the Indian Mines Act, 1923; (*b*) Coal Mines Rescue Rules; (*c*) sand stowing in coal mines; (*d*) list of mines proposed to be brought under the scope of the Indian Mines Act; (*e*) regarding the proposed stowing at mines the question of imposing a cess on all coalfields without exception which should also apply to Railway collieries and that a duty equal to the cess should be imposed on all coal imported into British India; (*f*) proposed amendments to the Indian Coal Mines Regulations, 1926; and (*g*) question of the retention of the cess on soft coke beyond 1939. The non-official members of the Board were Messrs. F. W. Manley, A. L. Ojha and Rai Sahib Upendra Nath Mondal.

The Bihar Mining Board for coal mines did not meet during the year and the only subject dealt with by correspondence was certain amendments to the Indian Coal Mines Regulations, 1926. The non-official members of the Board were Messrs J. E. Phelps, A. L. Ojha, Shiva Kali Bose and S. B. Sen.

The non-official members of the Mining Board for mines other than coal mines were Mr. J. E. Phelps and Rao Bahadur D. D. Thacker.

The Central Provinces Mining Board held no meetings during the year. The subjects dealt with by correspondence were:—(*a*) Coal Mines Rescue Rules; (*b*) legislation to secure evacuation of inhabited buildings rendered dangerous by mining operations; and (*c*) proposed further amendments to the Indian Coal Mines Regulations, 1926. The non-official members of the Board were Messrs. D. M. Nargolwalla, L. H. Bartlett, O.B.E., G. Llewelyn, Shamsher Bahadur Verma and Kunjilal Tulsiram Mehta.

Board of Examiners.

Five meetings of the Board of Examiners were held during the year. The non-official members of the Board were Messrs. N. N. Sarkar, L. A. Jacobs and Jas. E. Phelps. The local examiners appointed were Messrs. W. B. Penman and J. Thomson for coal mine managers' first class certificates; Messrs. D. Heron and B. Panda for coal mine managers' second class certificates and J. Mackay for the examination for coal mine surveyors' certificates. Mr. N. Barraclough, Inspector of Mines, was also an examiner and acted as Secretary for the coal mine managers' first and second class examinations; Mr. N. G. Chatterjee, Inspector of Mines, was also an examiner and acted as Secretary for the coal mine surveyors' examination.

Thirteen first class certificates of competency to manage a coal mine and two surveyors' certificates were granted in lieu of British certificates of the same class. At the examinations for coal mine managers' certificates held at Dhanbad in February, 93 candidates sat for first class certificates and 78 for second class certificates. Six certificates of the first class and eleven of the

second class were granted. At the examination for coal mine surveyors' certificates of competency held at Dhanbad in November, 43 candidates attended the examination. Nine of them were successful.

One thousand and ninety persons were examined for coal mine sirdars' certificates of competency and 733 certificates were granted. Out of 841 holders of sirdars' certificates examined in gas-testing, 561 were successful and their certificates were duly endorsed to that effect. 539 holders of sirdars' certificates appeared for re-examination in eyesight and hearing. 515 were successful and their certificates were duly endorsed. Two sirdars' certificates were granted in lieu of British certificates of the same class. Under Coal Mines Regulation 49, the certificates of four sirdars were suspended for periods varying from three to six months. During the year 30 duplicate sirdars' certificates and 68 duplicate discs were issued.

Mining Education.

At the Indian School of Mines, the number of students on the roll at the beginning of the session was 76, as compared with 68 at the beginning of the previous session. 27 students were in the first year, 19 in the second year, 17 in the third year and 14 in the fourth year. On the results of the examinations held at the end of the session, 27 students were promoted to the second year and 18 students to the third year. The results of the Diploma of Associateship and Certificate Examinations held in July 1938 were as follows :—

Diploma or Certificate.	No. of candidates.	No. of successful candidates.
Diploma of Associateship in Geology	2	.. (Class I *nil*).
		2 (Class II).
Diploma of Associateship in Mining Engineering	13	6 (Class I).
		5 (Class II).
Certificate in Geology	2	2
Certificate in Metal Mining	2	2
Certificate in Coal Mining	12	10

The mine surveying camp was pitched at Gonhudih colliery during the month of November 1938, and 55 students were in attendance. Visits and tours of inspection were paid as usual to the mica mines of Kodarma, the copper and iron mines of Singhbhum and to many local collieries and places of geological interest. Six former students obtained the second class colliery managers' certificate, the second, third, fourth and fifth places in order of merit at the examination being taken by former students. Three students obtained the surveyors' certificate of competency. In November 1938, the total number of students on the roll was 87.

In the Department of Mining and Metallurgy at the Benares Hindu University there were 116 students at the beginning of the session, as compared with 95 at the beginning of the previous session. Two students passed the final examination for the degree of B.Sc. in Mining and 10 in Metallurgy. Up to date the total number of Mining graduates is 31 and the total number of Metallurgy graduates 69. Most of the graduates were employed almost immediately after qualifying. Tours of inspection were paid to the mica mines at Kodarma, the iron mines at Gorumahisani, the manganese mines at Chaibasa and to some of the important collieries in Bokaro and Raniganj coalfields. Geological field-work was conducted in the Jubbulpore area and geological mapping was done in Jharia. During the summer vacation, 44 students underwent practical training in the most important mining and metallurgical works, including oil-fields, lead and silver mines of Upper Burma and tin mines of South Burma. One former student headed the list of the successful candidates at the First Class Colliery Managers' examination held at Dhanbad in February.

No advanced classes were held in the Raniganj coalfield during the year. Administrative approval of the Bengal Government has, however, been received for the re-opening of these classes in the Bengal Coalfield as an experimental measure for three years at an annual cost of Rs. 9,424 only. Such classes continued to be held under the auspices of the Government of Bihar at Jharia and Sijua in the Jharia coalfield. The total number of students attending the classes at these two centres was 105, as against 79 in the previous year. Twenty-one of the third year students appeared at the final examination and fourteen were successful. In both coalfields, courses of lectures were delivered in the modern Indian language to overmen and sirdars in the Raniganj coalfield in Bengali and in the Jharia coalfield in Hindi. There were eight centres in the Raniganj coalfield and 200 enrolled for this course. In the Jharia coalfield there were six centres with a total enrolment of 436. Classes in gas testing were also held at Sitarampur and Jamuria in the Raniganj coalfield and at Jharia in the Jharia coalfield for the training of colliery sirdars and shot-firers in gas-testing. The number of candidates enrolled for these classes in the Raniganj coalfield was 36 and in the Jharia coalfield 63.

Scientific and Technical Associations.

(*a*) *Mining, Geological and Metallurgical Institute of India.*

The total number of members, including subscribers, at the end of the financial year of the Institute, *i.e.*, on the 31st October 1938, was 438. The rate of subscription in the case of Student Associates has been reduced to Rs. 5 per year. In addition to the annual meeting, six ordinary general meetings were held for the reading and discussion of papers. Visits were also paid to the offices and laboratory of the Geological Survey of India, Calcutta; to the Central Provinces Manganese Ore Company Limited's manganese mines in the Central Provinces; to the Indian Steel and Wire Products Limited's work at Tatanagar; to the fire control work at the Ekra Jore in the Jharia coalfield; and to Messrs. Bird & Company's Rescue Station at Loyabad. Illustrated lantern lectures were delivered by Dr. Cyril S. Fox on "Mineral Development in Soviet Russia".

Five parts of the Transactions were published, forming parts 2, 3 and 4 of Volume 33 and Parts 1 and 2 of Volume 34. The Government of India prize and the Institute gold medal were awarded to Mr. J. Thomas for his paper entitled "Methods of Stowing for Indian Mines"; the Institute silver medal to Dr. Cyril S. Fox for his paper entitled "Mineral Development in Soviet Russia"; and the Institute bronze medal to Mr. P. N. Mathur for his paper entitled "Small scale manufacture of iron and steel in India by the direct method". The Pickering medal, presented by the Institute for the best student in mining at the Indian School of Mines, was awarded to Mr. B. R. Marwaha. The Hayden medal for the best student in Geology was awarded to Mr. G. C. Chattopadhyaya.

(*b*) *The Geological, Mining and Metallurgical Society of India.*

At the close of the session 1937-38, the total membership on the roll was 181. In addition to the annual general meeting, six ordinary general meetings were held. Five meetings were held in the Geological Laboratory, Presidency College, Calcutta, and one in the Indian School of Mines, Dhanbad. Fourteen original papers on various aspects of Geology and Mining were read and discussed at these meetings. During the year, parts 3 and 4 of Volume IX and parts 1 and 2 of Volume X of the Quarterly Journal of the Society were issued. One bulletin was also published, containing comments offered by various members on the Coal Mining Committee Report (1937). Five excursions to the following places were arranged:—(i) Amlabad colliery (Jharia coal-field); (ii) Barakar and its neighbourhood; (iii) The power house, workshop, etc., of the Indian School of Mines; (iv) Metal Box of India Limited, Kidderpore, Calcutta; (v) National Soap and Chemical Works, Limited, Tollygunj, Calcutta.

(*c*) *The Nationol Association of Colliery Managers* (*Indian Branch*).

The number of members of the National Association of Colliery Managers, Indian Branch, at the end of the year was 92. Some of the subjects dealt with by the Council during the year were:—(1) the amendments of the Indian Mines Regulations, 1926; (2) Coal Mines Rescue Rules; (3) the draft regulations for first working and sectional working; and (4) Electrical Supervisors' Certificates (Bengal). With the support of the Indian Mining Association, the Indian Mining Federation, the Indian Colliery Owners' Association and the Indian Mine Managers' Association, the Council approached the Government of Bengal to grant service certificates to *bonâ fide* electrical supervisors, without examination contingent upon such workmen having the necessary qualifications in respect of their length of service as supervisors at the time of the rules coming into force. The Council of the Association addressed the Government of India relating to the appointment of Junior Inspectors of Mines. Messrs. D. W. Baron and L. S. Buxton were representatives of the Association on the Railways and Collieries Advisory Board; Mr. M. M. Mukherjee was joint representative of the National Association of Colliery Managers (Indian Branch) and the Indian Mine Managers' Association on the Asansol Mines Board of Health; Mr. W. V. Curtain represented the Association on the Health and Baby Welfare Central Committee. Mr. H. S. Allen represented the Association on

the Dhanbad and District Leprosy Relief Committee and Mr. V. C. Durham on the Mining Education Advisory Board.

Four meetings were held—two in Dhanbad and two in Asansol, to display the safety in Mines Research Board (Great Britain) films depicting (*a*) underground mining operations; (*b*) protective equipment, and (*c*) underground shot-firing.

(*d*) *The Indian Mine Managers' Association.*

The membership of the Indian Mine Managers' Association at the end of the year was 240. Among the activities of the Association during the year were:—(1) consideration of the proposed amendments of the Coal Mines Regulations, 1926; (2) consideration of the Bihar Money-lender's Bill, 1937; (3) consideration of Draft Coal Mines Rescue Rules; (4) consideration of the questionnaire of the Labour Enquiry Committee issued by the Government of Bihar; (5) consideration of proposed "Stowing in Coal Mines"; (6) correspondence with the Government of India regarding the appointment of Junior Inspectors of Mines in India; (7) interview with the Premier of Bihar regarding representation on the Jharia Mines Board of Health and other local bodies; (8) correspondence with the Government of Bengal regarding the issue of Service Certificates for Electrical Supervisors in lieu of Certificates of Competency for Electrical Supervisors issued under Rule 40-A.; (9) correspondence with the Government of Bengal regarding separate representation for the Asansol Mines Board of Health; (10) active participation with the Safety First Association of India, Bombay; (11) closer touch with the National Association of Colliery Managers (Indian Branch), Indian Colliery Owners' Association and the Indian Mining Federation; (12) active participation in all public functions held in honour of high Government officials and co-operation with local bodies to raise funds for charitable purposes; and (13) excursions to places of Mining and geological interest. Mr. B. K. Bose represented the Soft Coke Research Committee; Mr. M. M. Mukherjee was the representative on the Asansol Mines Board of Health; Mr. S. C. Ghosh was the representative on the Asansol Health and Baby Welfare Society (Central Committee) and on the mining Education Advisory Board for part of the year; Mr. N. Ghosh on the Asansol Leprosy Relief Association for part of the year; Mr. J. K. Dholakia on the Mining Education Advisory Board for part of the year and on the Dhanbad Leprosy Relief Association; and Mr. K. K. Baksi on the Committee for the Society for the Prevention of Cruelty to animals and on the Governing Body to the Dhanbad and District Leprosy Relief Association. Mr. P. H. Pandya acted as President and S. M. Chatterjee acted as Honorary Secretary of the Railways and Collieries Advisory Board for part of the year.

(*e*) *The Railways and Collieries Advisory Board.*

The Railways and Collieries Advisory Board held one meeting during the year and dealt with the following subjects:—(1) public telephone connections with B. N. Railway weigh-bridges; (2) leaving of empty wagons at the buffer end of sidings; (3) cancelling of supplies before pilots started from the base stations; (4) timings of local trains of both B. N. Railway and E. I. Railway, their stoppages and extension further up the branch

lines; (5) availability of the Coal Manager, Adra, B. N. Railway at Bhaga, on the first Monday of every month; (6) charging and refunding of excess freights in certain cases; (7) desirability of having one base station at Ondal for freight purposes for both Up and Down traffics; (8) exemption of collieries from liability of freight in certain cases of undelivered wagons; and (9) privileges (*a*) to book up country wagons down country and *vice versâ*; (*b*) to allow diversion of wagons in certain cases. Mr. P. H. Pandya, the President of the Indian Mine Managers' Association, was the President, and Mr. W. V. Curtain, the Honorary Secretary of the National Association of Colliery Managers, was the Secretary of the Board up to November, and then Mr. S. M. Chatterjee, the officiating Secretary of the Indian Mine Managers' Association, assumed the Secretaryship for the remaining period of the year.

Labour Associations.

(*a*) *The Indian Colliery Labour Union.*

This Union is registered under the Indian Trade Union Act, 1926, and its headquarters are at Jharia. The number of members on the roll is 8,317, chiefly miners and skilled and unskilled labourers. The rates of subscription vary from three pies to four annas per month. The Union claims to have assisted workers in compensation claims and wage disputes. It has also organised lantern lectures on welfare schemes.

(*b*) *The Indian Miners' Association.*

The Indian Miners' Association is registered under the Indian Trade Union Act and has its head office at Jharia. The membership improved during the year and is now about 5,000. The rates of subscription vary from one anna to four annas per month according to the scale of pay. The Association has conducted meetings and lantern lectures on general education, hygiene and temperance, etc. Assistance has been given by the Association in wage disputes and compensation claims.

Labour Inquiry Committee.

The Bihar Legislative Assembly passed a resolution on the 3rd September 1937, recommending to Government that a Committee of the members of the House and outside experts be appointed by the Premier to investigate the conditions of industrial labour in Bihar and make recommendations on the same within six months.

In accordance with this recommendation the Hon'ble the Prime Minister has been pleased to appoint a Committee with Dr. Rajendra Prasad as Chairman for the purpose of conducting an enquiry into the conditions of (industrial) labour prevailing in the important industrial centres and industries of the province with particular reference to each important industry and locality and to make such recommendations as may appear practicable for the purpose of improving the level of wages, conditions of work, employment, etc., in the important industries and localities concerned.

The *Personnel* of the Committee consists of the following:—

Chairman.

DR. RAJENDRA PRASAD.

Members.

PROF. ABDUL BARI, M.L.A.

BABU JAGAT NARAIN LAL, M.L.A.

MR. M. P. GANDHI.

DR. RADHIKAMAL MUKHARJI.

MR. H. B. CHANDRA.

Secretary.

PROF. R. K. SARAN, M.A.

I, in my Circular No. 3, dated the 22nd April 1938, asked the owners, agents or managers of mines in the province to afford the Committee all facilities in carrying out the work entrusted to it. A general questionnaire was drawn up by the Enquiry Committee and issued to all industrial concerns throughout the province of Bihar. The Enquiry Committee also drew up a supplementary questionnaire on mining labour, copies of which were circulated to all collieries in Bihar. It is expected that the Committee will make its report about the middle of the year 1939.

VISITORS TO THE COALFIELDS.

Mr. W. D. Croft, C.I.E., Economic and Overseas Department of the India Office, visited the Jharia coalfield and was accompanied by Dr. D. Penman during the course of surface inspections of Kustore, Bhulanbararee and Khas Jharia collieries on the 8th January and Pure Jharia colliery on the 9th January.

The Hon'ble Mr. Jaglal Chaudhuri, Minister for Excise and Public Health visited the Jharia coalfield from 30th January to 1st February. On the 31st January, the Hon'ble Minister visited the Teetulmari Leprosy Hospital, Topchanchi Water Works and the Jharia Maternity and Child Welfare centre. On the 1st February, a visit was paid to Kustore colliery to see the surface dwellings.

The Hon'ble Mr. S. K. Sinha, Prime Minister of Bihar, visited the Jharia coalfield from the 11th to the 13th September 1938. On the 13th September the Hon'ble Prime Minister visited the Topchanchi Water Works.

OFFICIAL DUTIES, 1938.

Dr. D. Penman was Chief Inspector of Mines from 1st January to 24th March. He was on leave, preparatory to retirement, from the 25th March to the 8th April.

Dr. Penman came to India in March 1921, as Principal of the Indian School of Mines at Dhanbad and for a period was occupied in arranging for the building of the School. He joined the Department as an Inspector of Mines in December 1921, and on the School of Mines opening in November

1926, he returned as Principal, which post he occupied until 2nd September 1932. He returned to the Department as Chief Inspector of Mines and also retained the post of Principal of the School of Mines, which he relinquished on 1st November 1936. During Dr. Penman's period of Office as Chief Inspector of Mines, it was necessary to introduce a good deal of safety legislation to meet the difficult and changing conditions in mining operations in this country, and the beneficial effects of this legislation are already being observed. His high technical and practical attainments were recognised by the mining community and his opinion on mining matters was often sought, and he was always willing to collaborate with the managements of mines in dealing with any problems which arose. He was renowned throughout the coalfields for his integrity and fair dealing with all those with whom he came into contact. He was greatly respected by all the Officers who worked under him and he has left a record which will always be admired.

Mr. W. Kirby, Inspector of Mines, held charge of No. 1 Circle, up to the 24th March. He officiated as Chief Inspector of Mines from the 25th March and was appointed to that post from the 9th April.

Mr. N. Barraclough, Inspector of Mines, without circle, held charge of No. 1 Circle from the 25th March.

Mr. G. S. Cameron, Inspector of Mines, held charge of No. 2 Circle throughout the year.

Rai Bahadur H. M. Mitra was Electric Inspector of Mines throughout the year.

Mr. N. G. Chatterjee, Junior Inspector of Mines, was promoted to be an Inspector from the 14th April and was placed in-charge of the duties of the Inspector without circle. He was on leave from 26th September to 5th November.

Mr. H. K. Chatterjee, Junior Inspector of Mines, was on duty throughout the year.

Mr. A. Young was Junior Inspector of Mines up to 31st January and was permitted to resign from Government service from the 1st February.

Mr. S. S. Grewal, Junior Inspector of Mines, was on leave from the 14th February to 15th March.

Mr. V. S. Chopra, Assistant Inspector of Mines, was promoted to be a Junior Inspector from the 4th July and was on duty throughout the year.

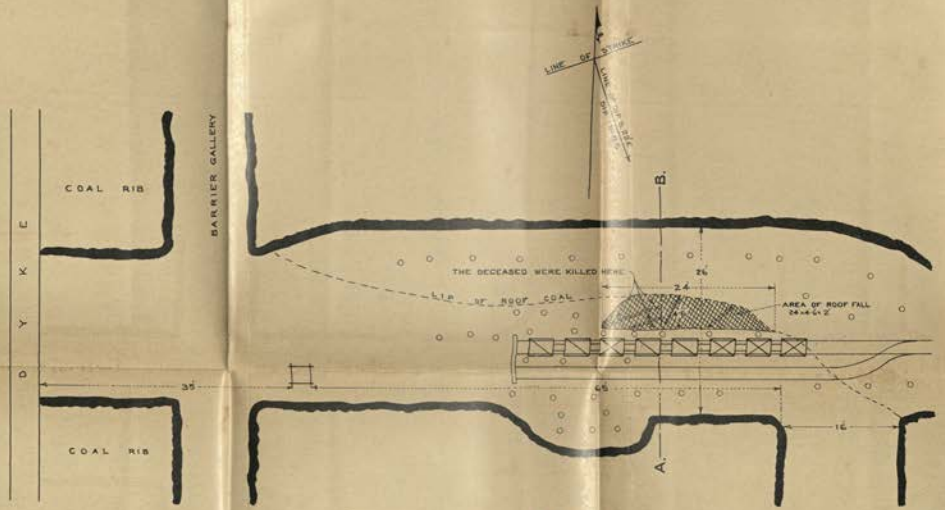
Mr. G. S. Jabbi, Assistant Inspector of Mines, was on leave from the 12th April to 21st May; from the 17th August to 27th September; and from the 8th November to 17th December.

Mr. M. Yasin was appointed to be an Assistant Inspector of Mines from the 5th July and was on duty to the end of the year.

The number of coal mines worked during the year was 665, which is 61 more than in the previous year. The number of metalliferous (including stone, etc.) mines at work was 1,288 as compared with 1,321 in 1937.

PLAN & SECTION ILLUSTRATING REPORT ON
FATAL ACCIDENT BY FALL OF ROOF
AT
THE EQUITABLE COAL Co. Ltd's BEJDIH MINE.

SCALE 1 INCH = 10 FEET.



PLAN

REFERENCES.

LOADED TUBS
PARTLY LOADED TUBS
AREA OF ROOF WHICH FELL
BODIES OF DECEASED XXX
Pprops ..... ooo
DISPLACED PROPS.

Reg. No. 2986 E 33-1275 '28

Vandyked at the Survey of India Offices, Calcutta.

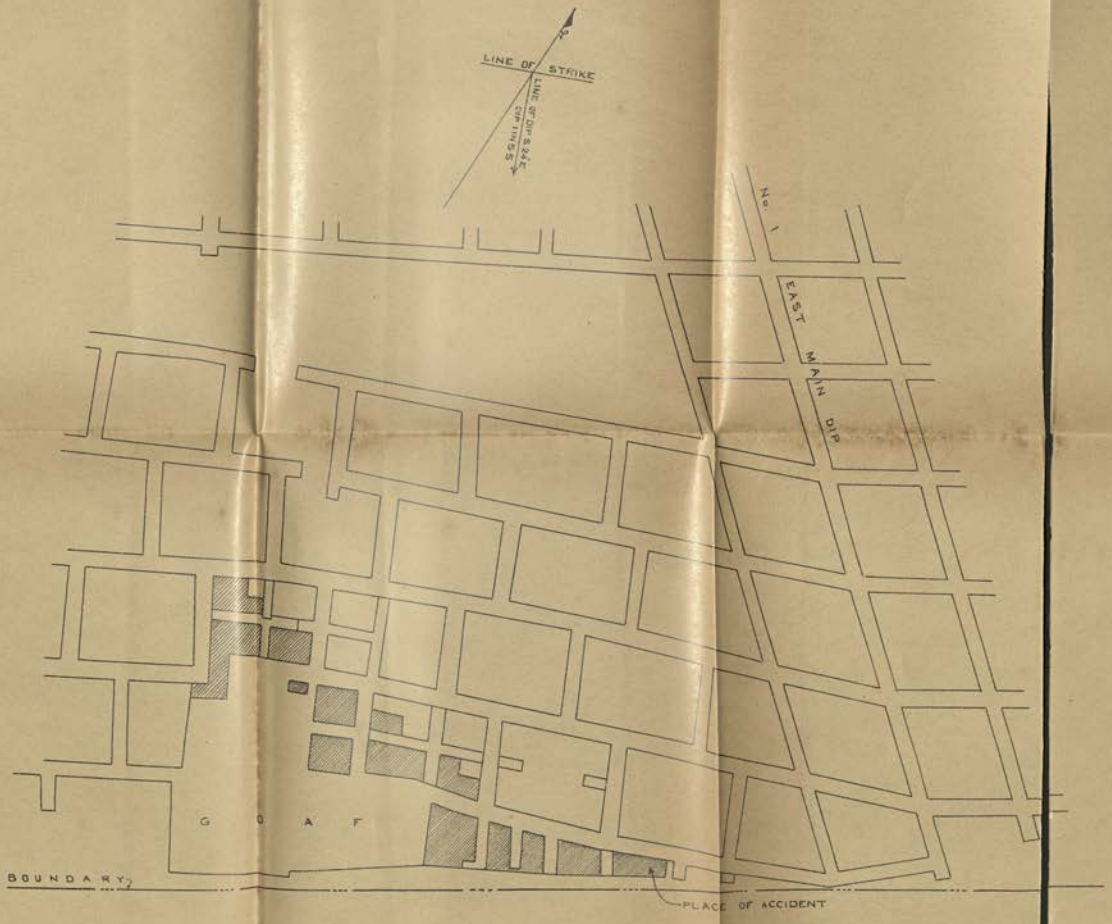
PLAN ILLUSTRATING REPORT ON

FATAL ACCIDENT BY FALL OF ROOF

AT

THE DHEMO MAIN COLLIERIES LTD'S DHEMO MAIN MINE.

SCALE 1 INCH = 100 FEET.



Reg. No. 2986 E'33-1276'39.

Vandyked at the Survey of India Offices, Calcutta.

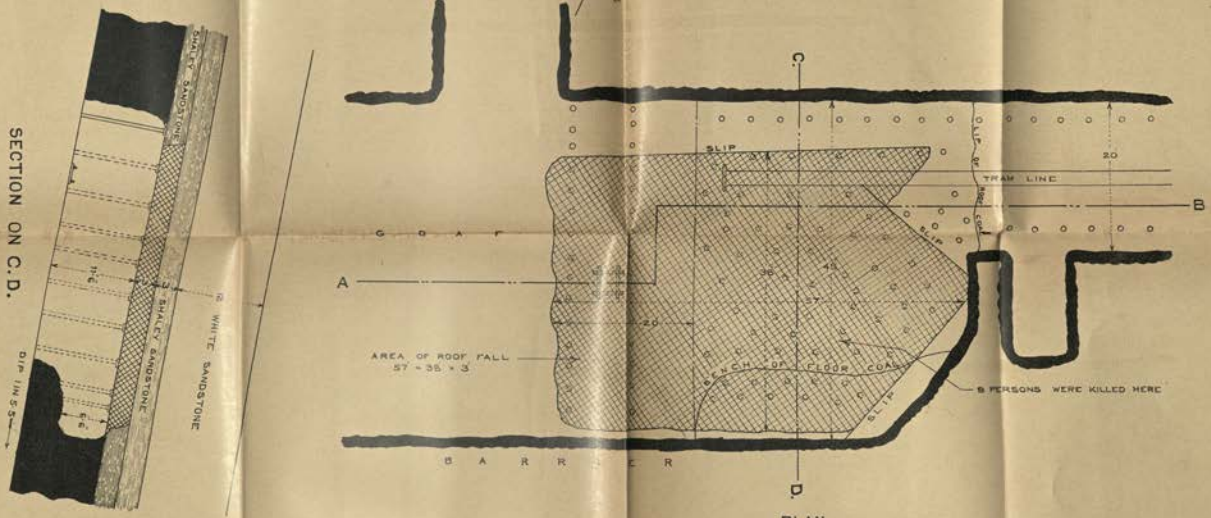
PLAN & SECTIONS ILLUSTRATING REPORT ON

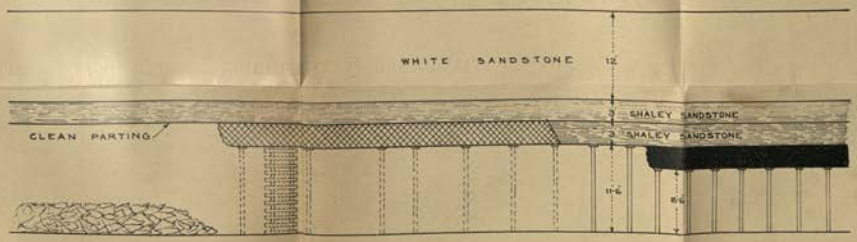
FATAL ACCIDENT BY FALL OF ROOF

AT

THE DHEMO MAIN COLLIERIES Ltd's DHEMO MAIN MINE.

SCALE 1 INCH = 10 FEET.





REFERENCES.

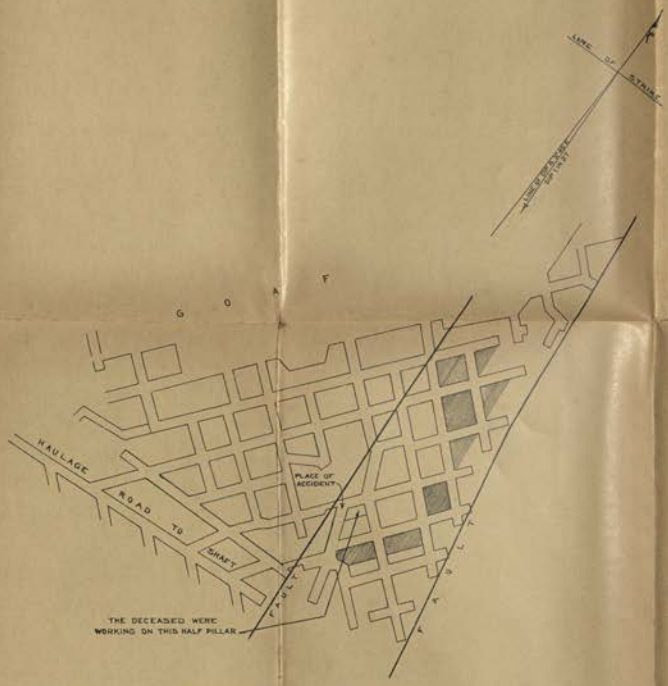
AREA OF ROOF WHICH FELL

PROPS

Reg. No. 2986 E'33-1275'39

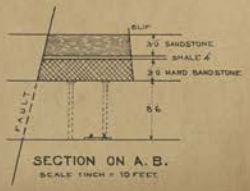
Vandyked at the Survey of India Offices, Calcutta.

PLANS & SECTION ILLUSTRATING REPORT ON
FATAL ACCIDENT BY FALL OF ROOF
AT
THE MUNDALPUR COAL Co. Ltd's MUNDALPUR MINE.



GENERAL PLAN.
SCALE 1 INCH = 100 FEET.

REFERENCES.
AREA OF ROOF WHICH FELL
BODIES OF DECEASED XXX
INJURED PERSONS
PROPS



SECTION ON A. B.
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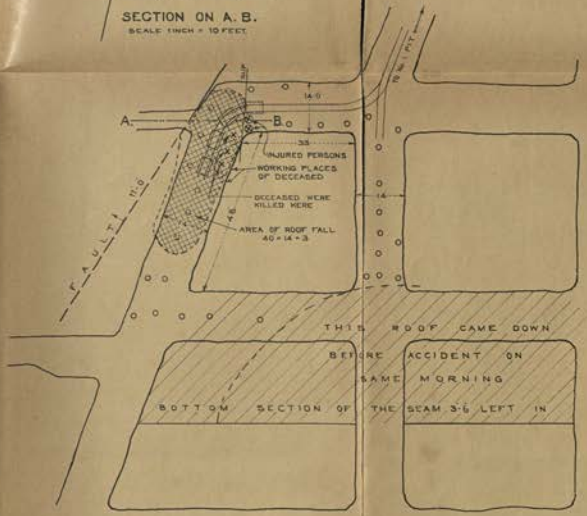


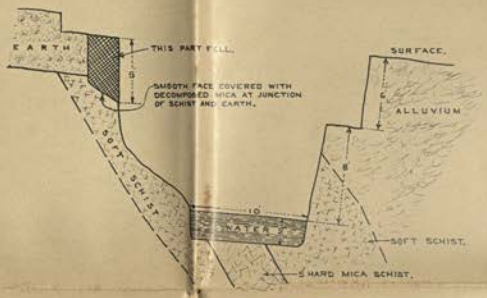
DETAIL PLAN.
SCALE 1 INCH = 20 FEET.

Rys No. 2586 E'33-10750

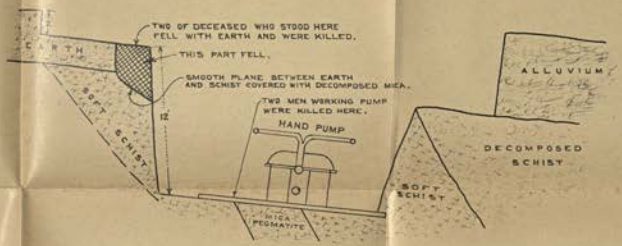
Hydryked at the Survey of India Offices, Calcutta.

PLAN & SECTIONS ILLUSTRATING REPORT ON
FATAL ACCIDENT BY FALL OF SIDE
AT
CHATTURAM HORILRAM LTD'S MATAUNI MICA MINE.

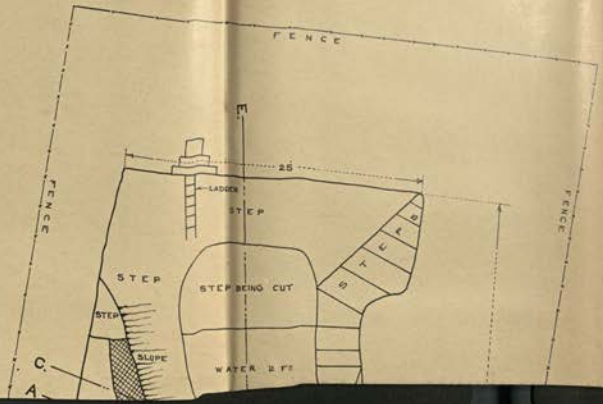
NOT TO SCALE.

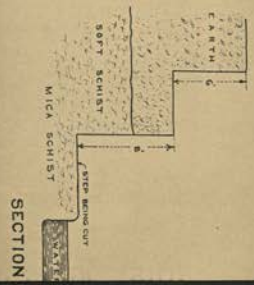


SECTION ON C. D.

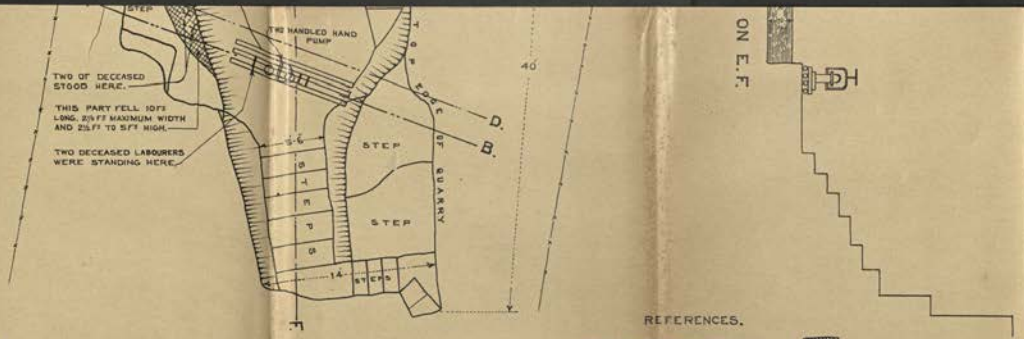

TWO OF DECEASED WHO STOOD HERE FELL WITH EARTH AND WERE KILLED.
EARTH
THIS PART FELL.
SMOOTH PLANE BETWEEN EARTH AND SCHIST COVERED WITH DECOMPOSED MICA.
TWO MEN WORKING PUMP WERE KILLED HERE.
HAND PUMP
ALLUVIUM
SOFT SCHIST
DECOMPOSED SCHIST
SOFT SCHIST
MICA PEGMATITE

SECTION ON A.B.





SECTION



PLAN.

REFERENCES.

AREA OF SIDE WHICH FELL.....

BODIES OF DECEASED..... x x

Regd No. 2986 E'33-1275 '38

Vandyked at the Survey of India Offices, Calcutta.

During the year 1,008 mines were inspected, many of them being inspected several times. 2,957 separate inspections were made. The cause and circumstances of nearly all fatal accidents and serious accidents of importance, and all complaints of breaches of regulations and rules were investigated. Many inspections were made at the invitation of mine-owners, superintendents and managers desirous of obtaining advice on safety matters. In the major colafields a large portion of the time of the Inspectors was occupied in invetsigating cases of actual or threatened damage to dwellings and roads by reason of the underground working of coal mines, in dealing with underground fires and in examining protective works against the risk of inundation. In addition, a large number of inspections of the sanitary conditions at mines were made by medical officers as *Ex-officio* Inspectors of mines.

Orders were issued and withdrawn as follows :—

Section, Regulation or Rules.	Orders issued.	Orders withdrawn.
Under Section 19 (1)	4	..
Under Section 19 (2)	21	7
Under Section 19 (1A)	10	..

Exemptions, partial or complete, and permissions were granted and withdrawn as follows :—

Regulation.	Number of cases.	Number withdrawn.
Under Coal Mines Regulation 53	3	..
Under Coal Mines Regulation 87-H,	2	..
Under Coal Mines Regulation 106	2	..
Under Coal Mines Regulation 116	1	..
Under Coal Mines Regulation 123	1	..
Under Coal Mines Regulation 87-I.	1	..
Under Metalliferous Mines Regulation 74	1	..

Information was received of two outbreaks of fire underground and four on the surface; seven cases of spontaneous heating underground and one irruption of water.

The number of original cases under the Land Acquisition (Mines) Act, 1885, at the end of 1938 stood at 752, fourteen of which were cases dealt with during the year. There were fifteen applications for modifications of restrictions, and one complaint of violations of restrictions, all of which were dealt with. The Act applies to Bengal and Bihar and Orissa only. In other provinces where Government owns the minerals, Provincial Governments were advised as to the restrictions necessary in cases where mine-owners sought permission to work minerals beneath railways, villages, etc.

I have the honour to be,

Sir,

Your most obedient servant,

W. KIRBY,

Chief Inspector of Mines in India.

APPE N

STATISTICS OF MINES

Table

Number of workers and output of minerals during the

Province.	District and Mineral field.	Total Output.	Average number of							
			Underground.							
			Males.						Females.	Total Males and Females.
			Overmen and Sirdars.	Coal-cutters.	Loaders.	Other skilled labour.	Other unskilled labour.	Total Males.		
		Tons								
Assam	Khasi and Jaintia Hills	5,632	3	22	11	4	1	41	...	41
	Lakhimpur, Makum Coalfield	232,904	78	262	320	311	371	1,342	...	1,342
	Naga Hills, Nazira ,,	28,764	10	59	35	66	84	254	...	254
	Total	267,300	91	343	366	381	456	1,637	...	1,637
Baluchistan	Quetta-Pishin, Sor Range Coalfield.	7,223	8	84	99	2	...	193	...	193
	Sibi, Khost Coalfield	7,165	12	89	135	3	...	239	...	239
	Total	14,388	20	173	234	5	...	432	...	432
Bengal	Bankura	4,192	1	7	7	1	1	17	...	17
	Birbhum	1,458	2	6	10	...	1	21	...	21
	Burdwan	7,739,722	1,045	16,561	8,997	4,907	8,400	39,910	...	39,910
	Total	7,745,372	1,048	16,576	9,014	4,908	8,402	39,948	...	39,948
Bihar	Manbhum— Raniganj Coalfield (part of)	814,332	137	2,112	905	580	1,160	4,894	...	4,894
	Jharia ,,	10,998,172	1,378	19,462	14,978	6,136	10,163	52,107	...	52,107
	Hazaribagh— Jharia Coalfield (part of)	146,290	17	185	178	35	44	459	...	459
	Bokaro ,,	2,007,016	97	1,035	682	239	619	2,672	...	2,672
	Giridih ,,	636,371	134	3,696	787	218	712	4,547	...	4,547
	Karanpura ,,	504,605	36	537	434	146	277	1,430	...	1,430
	Palamau— Daltonganj	393	3	12	12	3	3	33	...	33
	Ranchi— Karanpura Coalfield (part of)	31,309	5	72	55	10	14	156	...	156

DIX I.

AND MINERALS.

No. 1.

year 1938 at mines under the Indian Mines Act.

persons employed daily in and about the mines.

Open workings.									Surface.						
Males.									Males.						
Overmen and Sirdars.	Coal-cutters.	Loaders.	Other skilled labour.	Other unskilled labour.	Total Males.	Females.	Total Males and Females.	Total Underground and Open workings.	Clerical and supervising staff.	Skilled labour.	Unskilled labour.	Total Males.	Females.	Total Males and Females.	Grand Total.
A.L.															
...	...	...	...	...	...	...	...	41	5	1	22	28	7	35	76
2	2	8	10	5	27	12	39	1,881	46	176	185	407	133	540	1,921
...	...	...	...	...	...	...	...	254	13	35	62	110	...	110	364
2	2	8	10	5	27	12	39	1,676	64	212	269	545	140	685	2,361
...	...	...	...	...	...	...	...	193	...	...	11	11	...	11	204
...	...	4	2	...	6	...	6	245	...	1	7	8	...	8	253
...	...	4	2	...	6	...	6	438	...	1	18	19	...	19	457
1	3	4	...	9	17	23	40	57	11	2	10	23	7	30	87
...	...	...	...	...	...	...	...	21	2	2	1	5	2	7	28
20	89	43	72	516	740	165	905	40,815	1,704	3,541	7,652	12,897	5,537	18,434	59,249
21	92	47	72	525	757	188	945	40,893	1,717	3,545	7,663	12,925	5,546	18,471	59,364
12	130	38	23	108	300	146	446	5,340	232	475	872	1,579	757	2,336	7,676
142	1,924	533	348	1,266	4,213	2,171	6,384	59,491	2,368	5,139	12,933	20,340	8,432	28,772	87,263
3	120	5	16	51	195	149	344	803	60	101	225	386	227	613	1,416
93	2,676	651	350	1,811	5,581	2,535	8,116	10,788	271	637	1,312	2,210	449	2,659	13,447
3	14	...	5	1	23	11	34	4,581	109	187	709	1,005	580	1,585	6,166
1	367	75	306	561	1,310	429	1,739	3,169	66	299	388	753	137	890	4,059
1	8	...	...	1	10	...	10	43	...	9	22	31	23	54	97
2	25	11	2	3	43	20	63	219	12	13	63	88	46	134	353

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APPEN

STATISTICS OF MINES

Table

Number of workers and output of minerals during the

Province.	District and Mineral field.	Total Output.	Average number of							
			Underground.							
			Males.						Females.	Total Males and Females.
			Overmen and Sirdars.	Coal-cutters.	Loaders.	Other skilled labour.	Other unskilled labour.	Total Males.		
		Tons								CO
Bihar—*contd.*	Santhal Parganas—									
	Jainty Coalfield . .	42,900	18	210	115	63	54	460	...	460
	Raniganj Coalfield (part of).	91,216	21	320	55	59	42	497	...	497
	Total .	15,362,604	1,846	26,031	18,201	7,489	13,088	67,255	...	67,255
Central Provinces.	Betul	5,288	2	25	12	7	11	57	...	57
	Chanda	279,353	37	880	702	130	380	2,129	...	2,129
	Chhindwara, Pench Valley Coalfield.	1,369,208	143	3,014	1,734	865	932	6,688	...	6,688
	Yeotmal	4,777	2	49	26	25	54	156	...	156
	Total .	1,658,626	184	3,968	2,474	1,027	1,377	9,030	...	9,030
Orissa . .	Sambalpur— Hingir Rampur Coalfield	44,425	4	86	118	23	39	270	...	270
Punjab .	Attock	...	1	...	...	...	5	6	...	6
	Jhelum	66,808	68	294	217	136	256	971	.	971
	Mianwali	111,925	33	178	170	35	176	592	...	592
	Shahpur	5,295	2	26	...	2	25	55	...	55
	Total .	184,028	104	498	387	173	402	1,624	...	1,624
Sind . .	Dadu	...	...	...	...	...	...	...	...	...
	Grand Total (Coal) for 1938	25,276,743	3,297	43,275	30,794	14,006	23,824	120,196	..	120,196
	Grand Total of preceding year.	22,335,528	2,921	41,155	22,829	11,624	19,880	98,409	3,872	102,281
	Difference .	+2,941,215	+376	+7,120	+7,965	+2,382	+3,944	+21,787	−3,872	+7,915

DIX I—*contd.*

AND MINERALS—*contd.*

No. 1—*contd.*

year 1938 at mines under the Indian Mines Act—*contd.*

persons employed daily in and about the mines.

Open workings.									Surface.						
Males.									Males.						
Overmen and Sirdars.	Coal-cutters.	Loaders.	Other skilled labour.	Other unskilled labour.	Total Males.	Females.	Total Males and Females.	Total Underground and Open workings.	Clerical and supervising staff.	Skilled labour.	Unskilled labour.	Total Males.	Females.	Total Males and Females.	Grand Total.
AL—*contd.*															
...	...	...	...	...	...	...	...	460	25	67	97	189	29	218	678
2	30	10	23	13	78	21	99	596	34	75	99	208	59	267	863
259	5,284	1,328	1,072	3,815	11,753	5,482	17,235	84,490	3,077	6,992	16,720	26,789	10,739	37,528	122,018
...	...	...	...	...	...	...	...	57	12	8	15	35	10	45	102
...	...	...	...	...	...	...	...	2,129	91	100	369	560	168	728	2,857
4	82	57	26	131	300	259	559	7,247	206	924	1,259	2,389	909	3,298	10,545
...	...	...	...	...	...	...	...	156	9	24	65	98	13	111	267
4	82	57	26	131	300	259	559	9,589	318	1,056	1,708	3,082	1,100	4,182	13,771
...	...	...	...	...	...	...	...	270	...	26	31	57	38	95	365
...	...	...	...	...	...	...	...	6	...	...	...	...	...	...	6
...	...	...	...	...	...	...	...	971	72	104	325	501	...	501	1,472
3	...	2	4	20	29	...	29	621	75	56	394	525	11	536	1,157
...	...	...	...	...	...	...	...	55	10	4	43	57	...	57	112
3	...	2	4	20	29	...	29	1,753	157	164	762	1,083	11	1,094	2,847
...	...	...	1	9	10	...	10	10	...	...	...	...	...	...	10
289	5,460	1,441	1,187	4,505	12,882	5,941	18,823	130,019	5,333	11,996	27,171	44,500	17,574	62,074	201,093
227	5,037	1,527	828	3,126	10,747	4,818	15,565	117,846	4,707	10,519	23,887	39,106	14,197	53,303	171,149
+62	+423	—86	+359	+1,379	+2,135	+1,123	+3,258	+21,173	+626	+1,477	+3,284	+5,394	+3,377	+8,771	+29,944

Table

Number of workers and output of minerals during the

Province.	District and Mineral field.	Total Output.	Average number of persons employed						
			Underground.						
			Males.					Females.	Total Males and Females.
			Foremen and Mates.	Miners.	Other skilled labour.	Other unskilled labour.	Total Males.		
		Tons							IRON
Bihar	Palamau	2,256	...	...	...	...	...	...	...
	Singhbhum	1,418,834	...	...	...	...	...	...	...
	Total (Iron ore) for 1938.	1,421,090	...	...	...	...	...	...	...
	Total of preceding year.	1,587,362	...	...	...	...	...	...	...
	Difference	—166,272	...	...	...	...	...	...	...
									MANGANESE
Bihar	Singhbhum	24,469	...	...	...	...	...	...	...
Bombay	North Kanara	12,204	...	...	...	...	...	...	...
	Panch Mahals	49,394	6	161	6	28	201	...	201
	Total	61,598	6	161	6	28	201	...	201
Central Provinces	Balaghat	368,300	20	459	3	171	653	...	653
	Bhandara	129,630	...	...	...	...	...	...	...
	Chhindwara	4,401	...	...	...	...	...	...	...
	Nagpur	144,134	6	98	4	2	110	...	110
	Total	646,465	26	557	7	173	763	...	763

DIX I—*contd.*

AND MINERALS—*contd.*

No. 1—*contd.*

year 1938 at mines under the Indian Mines Act—*contd.*

daily in and about the mines.

Open workings.							Total Underground and Open workings.	Surface.						Grand Total.
Males.					Females.	Total Males and Females.		Males.				Females.	Total Males and Females.	
Foremen and Mates.	Miners.	Other skilled labour.	Other unskilled labour.	Total Males.				Clerical and supervising staff.	Skilled labour.	Unskilled labour.	Total Males.			
ORE.														
...	40	...	...	40	15	55	55	...	10	...	10	5	15	70
253	3,305	449	1,257	5,264	2,085	7,349	7,349	252	395	1,028	1,675	572	2,247	9,596
253	3,345	449	1,257	5,304	2,100	7,404	7,404	252	405	1,028	1,685	577	2,262	9,666
222	3,557	474	1,439	5,692	2,366	8,058	8,058	220	626	1,342	2,188	660	2,848	10,906
+31	—212	—25	—182	—288	—266	—654	—654	+32	—221	—314	—503	83	—586	—240
ORE.														
37	400	7	39	483	374	857	857	13	2	24	39	95	134	991
13	381	12	10	416	184	600	600	7	10	43	60	27	87	687
20	647	22	11	700	336	1,036	1,237	15	46	325	386	164	550	1,787
33	1,028	34	21	1,116	520	1,636	1,837	22	56	368	446	191	637	2,474
251	3,792	57	1,049	5,149	4,477	9,626	10,279	71	73	1,007	1,151	1,425	2,576	12,855
133	1,581	85	341	2,140	2,006	4,146	4,146	32	95	411	538	317	855	5,001
16	414	1	38	469	515	984	984	4	2	12	18	14	32	1,016
146	3,031	67	149	3,393	3,129	6,522	6,632	50	40	318	408	178	586	7,218
546	8,818	210	1,577	11,151	10,127	21,278	22,041	157	210	1,748	2,115	1,934	4,049	26,090

APPEN

STATISTICS OF MINES

Table

Number of workers and output of minerals during the

Province.	District and Mineral field.	Total Output.	Average number of persons employed						
			Underground.						
			Males.					Females.	Total Males and Females.
			Foremen and Mates.	Miners.	Other skilled labour.	Other unskilled labour.	Total Males.		
		Tons							MANGANESE
Madras	Bellary	2,000	...	...	...	...	...	...	...
	Vizagapatam	31,809	...	...	...	...	...	...	...
	Total	33,809	...	...	...	...	...	...	...
	Grand Total (Manganese Ore) for 1938.	766,341	32	718	13	201	964	...	964
	Grand Total of preceding year.	800,280	25	543	8	152	728	...	728
	Difference	—33,939	+7	+175	+5	+49	+236	...	+236
		Oz.							GO
Bihar	Manbhum	16	...	...	...	...	...	...	...
	Singhbhum	...	...	4	...	...	4	...	4
	Total	16	...	4	...	...	4	...	4
	Total of preceding year.	Oz. Dwt. 26 6	2	3	1	3	9	...	9
	Difference	—10 6	—2	+1	—1	—3	—5	...	—5

DIX I—*contd.*

AND MINERALS—*contd.*

No. 1—*contd.*

year 1938 at mines under the Indian Mines Act—*contd.*

daily in and about the mines.

Open workings.							Total Underground and Open workings.	Surface.						Grand Total.
Males.								Males.						
Foremen and Mates.	Miners.	Other skilled labour.	Other unskilled labour.	Total Males.	Females.	Total Males and Females.		Clerical and supervising staff.	Skilled labour.	Unskilled labour.	Total Males.	Females.	Total Males and Females.	
ORE—*contd.*														
2	14	4	7	27	10	37	37	1	4	8	13	8	21	58
30	1,594	12	20	1,656	765	2,421	2,421	19	31	48	98	160	258	2,679
32	1,608	16	27	1,683	775	2,458	2,458	20	35	56	111	168	279	2,737
648	11,854	267	1,664	14,433	11,796	26,229	27,193	212	303	2,196	2,711	2,388	5,099	32,292
571	9,544	225	1,554	11,894	9,778	21,672	22,406	175	200	1,655	2,030	1,832	3,862	26,262
+77	+2,310	+42	+110	+2,539	+2,018	+4,557	+4,793	+37	+103	+541	+681	+556	+1,237	+6,030
LD.														
2	11	2	3	18	...	18	18	3	7	36	46	57	103	121
...	...	...	...	...	...	...	4	...	...	4	4	...	4	8
2	11	2	3	18	...	18	22	3	7	40	50	57	107	129
2	8	3	50	63	29	92	101	6	6	35	47	34	81	182
..	+3	—1	—47	—45	—29	—74	—79	—3	+1	+5	+3	+23	+26	—53

APPEN

STATISTICS OF MINES

Table

Number of workers and output of minerals during the

Province.	District and Mineral field.	Total Output.	Average number of persons employed						
			Underground.						
			Males.					Females.	Total Males and Females.
			Foremen and Mates.	Miners.	Other skilled labour.	Other unskilled labour.	Total Males.		
		Tons							CHROMITE
Baluchistan	Quetta-Pishin	303	...	...	...	...	...	...	...
	Zhob	21,589	1	17	...	...	18	...	18
	Total	21,892	1	17	...	...	18	...	18
Bihar	Singhbhum	5,194	...	...		...	...	...	...
	Grand Total (Chromite Ore) for 1938.	27,086	1	17	...	...	18	...	18
	Grand Total of preceding year.	35,387	4	106	...	...	110	...	110
	Difference	—8,301	—3	—89	...	...	—92	...	—92
									COPPER
Bihar	Singhbhum	288,076	3	414	5	1,060	1,482	...	1,482
	Total of preceding year.	371,458	9	443	...	1,165	1,617	...	1,617
	Difference	—83,382	—6	—29	+5	—105	—135	...	—135

DIX I—*contd.*

ND MINERALS—*contd.*

No. 1—*contd.*

year 1938 at mines under the Indian Mines Act—*contd.*

daily in and about the mines.

	Open workings.							Total Underground and Open workings.	Surface.						Grand Total.
	Males.					Females.	Total Males and Females.		Males.				Females.	Total Males and Females.	
	Foremen and Mates.	Miners.	Other skilled labour.	Other unskilled labour.	Total Males.				Clerical and supervising staff.	Skilled labour.	Unskilled labour.	Total Males.			
ORE.															
1	12	...	...	13	...	13	13	...	...	...	...	...	...	...	13
8	181	2	12	203	...	203	221	...	4	130	134	...	138	359
9	193	2	12	216	...	216	234	...	4	130	134	...	138	372
45	289	16	25	375	370	745	745	15	2	12	29	8	37	782
54	482	18	37	591	370	961	979	19	6	142	167	8	175	1,154
53	612	37	27	729	428	1,157	1,267	18	12	161	192	11	202	1,469
+1	—130	—19	+10	—138	—58	—196	—288	+1	—6	+81	—24	—3	—27	—315
ORE.															
...	...	...	...	...	...	...	1,482	49	272	626	947	308	1,255	2,737
...	...	...	...	...	...	...	1,617	52	303	838	1,193	402	1,595	3,212
...	...	...	...	...	...	...	—135	—3	—31	—212	—246	—94	—340	—475

APPEN

STATISTICS OF MINES

Table

Number of workers and output of minerals during the

Province.	District and Mineral field.	Total Output.	Average number of persons employed						
			Underground.						
			Males.					Females.	Total Males and Females.
			Foremen and Mates.	Miners.	Other skilled labour.	Other unskilled labour.	Total Males.		
		Cwt.							MI
Bihar	Bhagalpur	118	1	9	1	7	18	...	18
	Gaya	14,700	72	983	346	807	2,208	...	2,208
	Hazaribagh	65,371	702	6,546	1,187	3,140	11,575	...	11,575
	Manbhum	319	...	...	...	...	...	...	...
	Monghyr	3,727	52	377	64	403	896	...	896
	Total	84,235	827	7,915	1,598	4,357	14,697	...	14,697
Madras	Nellore*	22,201	85	592	766	456	1,899	...	1,899
	Nilgiris	77	1	13	2	9	25	...	25
	Salem	638	3	...	29	15	47	...	47
	Total	22,916	89	605	797	480	1,971	...	1,971
Rajputana	Ajmer-Merwara*	1,684	13	109	3	31	156	...	156
	Grand Total (Mica) for 1938.	108,835	929	8,629	2,398	4,868	16,824	...	16,824
	Grand Total of preceding year.	103,641	961	9,179	2,192	4,652	16,984	...	16,984
	Difference	+5,194	—32	—550	+206	+216	—160	...	—160

* 36,975 cwt. of waste mica useful for

DIX I—*contd.*

AND MINERALS—*contd.*

No. 1—*contd.*

year 1938 at mines under the Indian Mines Act—*contd.*

daily in and about the mines.

Open workings.								Surface.						
Males.								Males.						
Foremen and Mates.	Miners.	Other skilled labour.	Other unskilled labour.	Total Males.	Females.	Total Males and Females.	Total Underground and Open workings.	Clerical and supervising staff.	Skilled labour.	Unskilled labour.	Total Males.	Females.	Total Males and Females.	Grand Total.
CA.														
7	61	2	46	116	41	157	175	...	...	...	...	...	...	175
22	743	98	227	1,090	30	1,120	3,328	191	125	81	397	58	455	3,783
170	1,651	238	573	2,632	210	2,842	14,417	663	1,080	757	2,500	456	2,956	17,373
4	4	15	26	49	18	67	67	3	3	7	13	8	21	88
26	197	24	183	430	23	453	1,349	65	315	64	444	146	590	1,939
229	2,656	377	1,055	4,317	322	4,639	19,336	922	1,523	909	3,354	668	4,022	23,358
59	297	308	526	1,190	834	2,024	3,923	126	456	279	861	1,278	2,139	6,062
...	...	...	...	...	...	...	25	..	5	5	10	...	10	35
1	...	6	1	8	1	9	56	2	18	5	25	4	29	85
60	297	314	527	1,198	835	2,033	4,004	128	479	289	896	1,282	2,178	6,182
22	197	3	23	245	107	352	508	11	91	9	111	...	111	619
311	3,150	694	1,605	5,760	1,264	7,024	23,848	1,061	2,023	1,207	4,361	1,950	6,311	30,159
326	3,401	642	1,436	5,805	1,138	6,943	23,927	996	1,608	1,097	3,701	1,635	5,336	29,263
—15	—251	+52	+169	—45	+126	+81	—79	+65	+485	+110	+660	+315	+975	+896

splitting was also raised.

STATISTICS OF MINES

Table

Number of workers and output of minerals during the

Province.	District and Mineral field.	Total Output.	Average number of persons employed						
			Underground.						
			Males.					Females.	Total Males and Females.
			Foremen and Mates.	Miners.	Other skilled labour.	Other unskilled labour.	Total Males.		
		Tons.							
Punjab . .	Jhelum . .	119,654	29	422	46	172	669	...	669
	Mianwali . .	15,308	...	95	...	...	95	...	95
	Shahpur . .	29,712	4	88	9	40	141	...	141
	Grand Total (Salt) for 1938.	164,674	33	605	55	212	905	...	905
	Grand Total of preceding year.	163,813	34	594	57	186	871	15	886
	Difference . .	+861	—1	+11	—2	+26	+34	—15	+19
Madras . .	Salem . . .	23,062	...	...	...	...	...	...	...
	Total of preceding year.	32,782	...	...	...	...	...	...	...
	Difference . .	—9,730	...	...	...	...	...	...	...

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DIX I—*contd.*

AND MINERALS—*contd.*

No. 1—*contd.*

year 1938 at mines under the Indian Mines Act—*contd.*

daily in and about the mines.

Open workings.								Surface.						
Males.								Males.						
Foremen and Mates.	Miners.	Other skilled labour.	Other unskilled labour.	Total Males.	Females.	Total Males and Females.	Total Underground and Open workings.	Clerical and supervising staff.	Skilled labour.	Unskilled labour.	Total Males.	Females.	Total Males and Females.	Grand Total.
LT.														
1	...	...	21	22	...	22	691	1	120	220	341	...	341	1,032
...	...	...	...	...	...	...	95	...	...	67	67	...	67	162
...	...	...	...	...	...	...	141	1	10	47	58	...	58	199
1	...	...	21	22	...	22	927	2	130	334	466	...	466	1,393
1	...	11	...	12	...	13	898	2	92	361	387	...	455	1,353
...	...	—11	+21	+10	...	+9	+29	...	+38	—27	+79	...	+11	+40
SITE.														
21	330	...	636	987	532	1,519	1,519	16	...	1	17	...	17	1,536
17	332	...	721	1,070	310	1,380	1,380	19	83	74	176	8	184	1,56
+4	—2	...	—85	—83	+222	+139	+139	—3	—83	—73	—159	—8	—167	—28

APPEN

STATISTICS OF MINES

Table

Number of workers and output of minerals during the

Province.	District and Mineral field.	Total Output.	Average number of persons employed						
			Underground.						
			Males.					Females.	Total Males and Females.
			Foremen and Mates.	Miners.	Other skilled labour.	Other unskilled labour.	Total Males.		
		Tons.							STEA
Bihar . .	Hazaribagh . .	618	...	...	...	...	...	...	...
	Singhbhum . .	74	...	...	...	...	...	...	...
	Total .	692	...	...	...	...	...	...	...
Central Provinces.	Jubbulpore .	1,534	1	...	...	...	1	...	1
Madras.	Nellore . . .	32	...	13	...	...	13	...	13
United Provinces.	Hamirpur . .	39	...	14	...	23	37	...	37
	Grand Total (Steatite) for 1938.	2,297	1	27	...	23	51	...	51
	Grand Total of preceding year.	554	3	20	15	27	65	...	65
	Difference . .	−257	−2	+7	−15	−4	−14	...	−14
		Tons.							SLA
Bihar . .	Monghyr . .	820	...	...	...	...	...	...	...

DIX I—*contd.*

AND MINERALS—*contd.*

No. 1—*contd.*

year 1938 at mines under the Indian Mines Act—*contd.*

daily in and about the mines.

Open workings.								Surface.						
Males.								Males.						
Foremen and Mates.	Miners.	Other skilled labour.	Other unskilled labour.	Total Males.	Females.	Total Males and Females.	Total Underground and Open workings.	Clerical and supervising staff.	Skilled labour.	Unskilled labour.	Total Males.	Females.	Total Males and Females.	Grand Total.
TITE.														
...	3	9	28	40	23	63	63	...	...	...	...	...	...	63
2	4	...	...	6	6	12	12	1	...	3	4	6	10	22
2	7	9	28	46	29	75	75	1	...	3	4	6	10	85
...	...	...	62	62	23	85	86	2	...	...	2	...	2	88
...	...	...	...	...	...	...	13	...	...	...	...	...	...	13
...	...	31	8	39	...	39	76	...	30	...	30	...	30	106
2	7	40	98	147	52	199	250	3	30	3	36	6	42	292
4	26	39	51	120	80	200	265	4	36	46	86	68	154	419
—2	—19	+1	+47	+27	—28	—1	—15	—1	—6	—43	—50	—62	—112	—127
TE.														
2	8	22	27	59	7	66	66	...	...	...	...	...	...	66

APPEN

STATISTICS OF MINES

Table

Number of workers and output of minerals during the

Province.	District and Mineral field.	Total Output.	Average number of persons employed						
			Underground.						
			Males.					Females.	Total Males and Females.
			Foremen and Mates.	Miners.	Other skilled labour.	Other unskilled labour.	Total Males.		
		Tons.							**SLA**
Punjab . .	Gurgaon . .	1,304	...	...	...	...	...	...	...
	Kangra . . .	5,609	...	...	...	...	...	...	...
	Total .	6,913	...	...	...	...	...	...	...
	Grand Total (Slate) for 1938.	7,733	...	...	...	...	...	...	...
	Grand Total of preceding year.	7,446	...	...	...	...	...	...	...
	Difference . .	+287	...	...	...	...	...	...	...
		Tons.							**LIME**
Bihar .	Ranchi . .	14,002	...	...	...	...	...	...	...
	Shahabad . .	599,136	...	...	...	...	...	...	...
	Total .	613,138	...	...	...	...	...	...	...
Central Provinces.	Bilaspur . .	80,392	...	...	...	...	...	...	...
	Jubbulpore . .	453,862	...	...	...	...	...	...	...
	Total .	534,254	...	...	...	...	...	...	...
Madras . .	Coimbatore . .	172,430	...	...	...	...		...	...

DIX I—*contd.*

AND MINERALS—*contd.*

No. 1—*contd.*

year 1938 at mines under the Indian Mines Act—*contd.*

daily in and about the mines.

Open workings.							Total Underground and Open workings.	Surface.						Grand Total.
Males.					Females.	Total Males and Females.		Males.				Females.	Total Males and Females.	
Foremen and Mates.	Miners.	Other skilled labour.	Other unskilled labour.	Total Males.				Clerical and supervising staff.	Skilled labour.	Unskilled labour.	Total Males.			
TE—*contd.*														
6	19	27	23	75	...	75	75	1	...	2	3	...	3	78
61	131	82	128	402	...	402	402	2	2	2	6	...	6	408
67	150	109	151	477	...	477	477	3	2	4	9	...	9	486
69	158	131	178	536	7	543	543	3	2	4	9	...	9	552
68	205	127	175	575	5	580	580	8	2	4	14	...	14	594
+1	—47	+4	+3	—39	+2	—37	—37	—5	...	...	—5	...	—5	—42
STONE.														
1	75	1	12	89	15	104	104	3	9	8	20	9	29	133
155	662	264	896	1,977	545	2,522	2,522	232	183	200	615	28	643	3,165
156	737	265	908	2,066	560	2,626	2,626	235	192	208	635	37	672	3,298
13	117	237	27	394	163	557	557	7	48	30	85	80	165	722
58	618	62	1,165	1,903	2,964	4,867	4,867	36	12	184	232	20	252	5,119
71	735	299	1,192	2,297	3,127	5,424	5,424	43	60	214	317	100	417	5,841
2	...	...	225	227	222	449	449	3	...	...	3	...	3	452

APPEN

STATISTICS OF MINES

Table

Number of workers and output of minerals during the

Province.	District and Mineral field.	Total Output.	Average number of persons employed						
			Underground.						
			Males.					Females.	Total Males and Females.
			Foremen and Mates.	Miners.	Other skilled labour.	Other unskilled labour.	Total Males.		
									LIME
		Tons.							
Punjab	Attock	218,947	...	...	...	...	...	...	...
	Jhelum	8,889	...	...	...	...	...	...	...
	Mianwali	34,400	...	...	...	...	...	...	...
	Total	262,236	...	...	...	...	...	...	...
	Grand Total (Limestone) for 1938	1,582,058	...	...	...	...	...	...	...
	Grand Total of preceding year.	1,318,598	...	...	...	...	...	...	...
	Difference	+263,460	...	...	...	...	...	...	...
									STONE (CHIEFLY IGNEOUS
		Tons.							
Bengal	Birbhum	73,086	...	...	...	...	...	...	...
Bihar	Gaya	93,619	...	...	...	...	...	...	...
	Monghyr	49,656	...	...	...	...	...	...	...
	Sonthal Parganas	379,006	...	...	...	...	...	...	...
	Shahabad	48,376	...	...	...	...	...	...	...
	Singhbhum	46,338	...	...	...	...	...	...	...
	Total	616,995	...	...	...	...	...	...	...
Bombay	Bombay	220,030	...	...	...	...	...	...	...
	Bombay Suburban	31,545	...	...	...	...	...	...	...
	Kaira	16,787	...	...	...	...	...	...	...
	Surat	83,091	...	...	...	...	...	...	...
	Thana	27,863	...	...	...	...	...	...	...
	Total	379,316	...	...	...	...	...	...	...

DIX I—*contd.*

AND MINERALS—*contd.*

No. 1—*contd.*

year 1938 at mines under the Indian Mines Act—*contd.*

daily in and about the mines.

Open workings.							Total Underground and Open workings.	Surface.						Grand Total.
Males.					Females.	Total Males and Females.		Males.				Females.	Total Males and Females.	
Foremen and Mates.	Miners.	Other skilled labour.	Other unskilled labour.	Total Males.				Clerical and supervising staff.	Skilled labour.	Unskilled labour.	Total Males.			
STONE—*contd.*														
4	46	1	365	416	...	416	416	...	...	...	...	...	...	416
...	39	...	...	39	...	39	39	4	...	10	14	...	14	53
6	200	...	...	206	5	211	211	...	...	...	...	...	...	211
10	285	1	365	661	5	666	666	4	...	10	14	...	14	680
239	1,757	565	2,690	5,251	3,914	9,165	9,165	285	252	432	969	137	1,106	10,271
236	1,107	536	2,505	4,384	2,640	7,024	7,024	234	259	693	1,186	239	1,425	8,449
+3	+650	+29	+185	+867	+1,274	+2,141	+2,141	+51	—7	—261	—217	—102	—319	+1,822
ROCK).														
1	282	6	81	370	...	370	370	37	52	271	360	145	505	875
15	252	65	185	517	215	732	732	...	...	...	...	...	..	732
6	...	120	79	205	100	305	305	5	1	58	64	...	64	369
101	588	519	155	1,363	217	1,580	1,580	106	262	394	762	373	1,135	2,715
...	...	...	214	214	25	239	239	...	...	...	...	...	..	239
9	340	37	371	757	474	1,231	1,231	6	34	37	77	17	94	1,325
131	1,180	741	1,004	3,056	1,031	4,087	4,087	117	297	489	903	390	1,293	5,380
12	131	100	198	441	28	469	469	27	...	1	28	32	60	529
...	...	...	55	55	...	55	55	2	33	66	101	...	101	156
2	...	21	...	23	...	23	23	3	4	15	22	...	22	45
13	34	66	221	334	257	591	591	10	4	18	32	...	32	623
5	...	...	107	112	70	182	182	5	...	...	5	...	5	187
32	165	187	581	965	355	1,320	1,320	47	41	100	188	32	220	1,540

Table

Number of workers and output of minerals during the

Province.	District and Mineral field.	Total Output.	Average number of persons employed						
			Underground.						
			Males.					Females.	Total Males and Females.
			Foremen and Mates.	Miners.	Other skilled labour.	Other unskilled labour.	Total Males.		
		Tons.	STONE (CHIEFLY IGNEOUS						
Central Provinces.	Akola	13,586	...	...	...	...	...	...	...
	Amraoti	7,623	...	...	...	...	...	...	...
	Nagpur	1,199	...	...	...	...	...	...	...
	Total	22,408	...	...	...	...	...	...	...
Delhi	Delhi	11,178	...	...	...	...	...	...	...
Madras	Chingleput	108,325	...	...	...	...	...	...	...
	East Godavari	9,528	...	...	...	...	...	...	...
	Guntur	27,420	...	...	...	...	...	...	...
	Kistna	20,716	...	...	...	...	...	...	...
	Total	165,989	...	...	...	...	...	...	...
Punjab	Jhang	8,270	...	...	...	...	...	...	...
	Jhelum	46,387	...	...	...	...	...	...	...
	Sheikhupura	4,829	...	...	...	...	...	...	...
	Total	59,486	...	...	...	...	...	...	...

DIX I—*contd.*

AND MINERALS—*contd.*

No. 1—*contd.*

year 1938 at mines under the Indian Mines Act—*contd.*

daily in and about the mines.

Open workings.							Total Underground and Open workings.	Surface.						Grand Total.
Males.					Females.	Total Males and Females.		Males.				Females.	Total Males and Females.	
Foremen and Mates.	Miners.	Other skilled labour.	Other unskilled labour.	Total Males.				Clerical and supervising staff.	Skilled labour.	Unskilled labour.	Total Males.			
ROCK)—*contd.*														
2	...	...	38	40	32	72	72	2	...	...	2	...	2	74
4	...	...	50	54	25	79	79	1	...	...	1	...	1	80
3	...	...	50	53	50	103	103	1	...	...	1	...	1	104
9	...	...	138	147	107	254	254	4	...	...	4	...	4	258
...	34	30	45	109	5	114	114	4	...	...	4	...	4	118
...	...	563	41	604	473	1,077	1,077	20	...	102	122	62	184	1,261
...	...	66	...	66	16	82	82	...	...	...	...	...	...	82
...	25	4	106	135	21	156	156	...	...	12	12	...	12	168
...	69	...	...	69	...	69	69	3	...	34	37	8	45	114
...	94	633	147	874	510	1,384	1,384	28	...	148	171	70	241	1,625
5	40	1	74	120	...	120	120	...	...	30	30	...	30	150
5	96	...	135	236	8	244	244	3	5	16	24	...	24	268
...	...	...	...	...	...	...	...	...	23	...	...	...	23	23
10	136	1	209	356	8	364	364	3	28	46	54	...	77	441

STATISTICS OF MINES

Table

Number of workers and output of minerals during the

Province.	District and Mineral field.	Total Output.	Average number of persons employed						
			Underground.						
			Males.					Females.	Total Males and Females.
			Foremen and Mates.	Miners.	Other skilled labour.	Other unskilled labour.	Total Males.		
		Tons.							
									STONE (CHIEFLY
Rajputana .	Ajmer-Merwara .	9							Figures included in
Sindh . .	Sukkur . .	30,303	...	...	...	...	...	...	...
United Provinces.	Allahabad . .	74,928	...	...	...	...	...	...	...
	Banda . . .	1,104	...	...	...	...	...	...	...
	Jhansi . . .	21,974	...	...	...	...	...	...	...
	Total .	98,001	...	...	...	...	...	...	...
	Grand Total (Stone) for 1938.	1,456,771	...	...	...	...	...	...	...
	Grand Total of preceding year.	1,205,756	...	...	...	...	...	..	...
	Difference . .	+251,015	...	...	...	...	...	...	...
									SAND
Bihar . .	Shahabad . .	18,612	...	...	...	...	...	...	...
	Total of preceding year.	39,414	...	...	...	...	...	...	...
	Difference . .	—20,802	...	...	...	...	...	...	...

DIX I—*contd.*

AND MINERALS—*contd.*

No. 1—*contd.*

year 1938 at mines under the Indian Mines Act—*contd.*

daily in and about the mines.

Open workings.								Surface.						
Males.								Males.						
Foremen and Mates.	Miners.	Other skilled labour.	Other unskilled labour.	Total Males.	Females.	Total Males and Females.	Total Underground and Open workings.	Clerical and supervising staff.	Skilled labour.	Unskilled labour.	Total Males.	Females.	Total Males and Females.	Grand Total.
IGNEOUS ROCK)—*concld.*														
these for mica.														
8	60	62	...	130	15	145	145	1	...	1	2	...	2	147
19	...	107	359	485	128	613	613	12	4	2	18	...	18	631
...	...	5	15	20	18	38	38	...	1	...	1	...	1	39
23	144	102	32	301	38	339	339	6	48	46	100	60	160	499
42	144	214	406	806	184	990	990	18	53	48	119	60	179	1,169
233	2,095	1,874	2,611	6,813	2,215	9,028	9,028	254	471	1,103	1,828	697	2,525	11,553
204	2,041	1,632	2,095	5,972	1,904	7,876	7,876	225	357	1,062	1,644	544	2,188	10,064
+29	+54	+242	+516	+841	+311	+1,152	+1,152	+29	+114	+41	+184	+153	+337	+1,489
STONE.														
3	...	19	55	77	26	103	103	3	...	19	22	8	30	133
12	42	33	51	138	57	195	195	...	28	15	43	9	52	247
—9	—42	—14	+4	—61	—31	—92	—92	+3	—28	+4	—21	—1	—22	—114

STATISTICS OF MINES

Table

Number of workers and output of minerals during the

Province.	District and Mineral field.	Total Output.	Average number of persons employed						
			Underground.						
			Males.					Females.	Total Males and Females.
			Foremen and Mates.	Miners.	Other skilled labour.	Other unskilled labour.	Total Males.		
		Tons.							GRA
Bihar . .	Singhbhum . .	14,117						Figures included	
Bombay . .	Kaira . .	16,528						Figures included	
	Thana . .	406						Figures included	
	Total .	16,934						Figures included	
Madras . .	Chingleput . .	16,491						Figures included	
	Grand Total (Gravel) for 1938.	47,542						Figures included	
	Grand Total of preceding year.	39,934						Figures included	
	Difference . .	+7,608	...	...	...	...	...	...	...
		Tons.							MU
Bombay . .	Bombay Suburban.	17,588						Figures included	
	Kaira . .	12,711	...	...	...	...	...	...	...
	Thana .	12,307						Figures included	
	Total .	42,606	...	...	...	...	...	...	...
United Provinces.	Jhansi . .	1,157						Figures included	
	Grand Total (Murum) for 1938.	43,763	...	...	...	...	...	...	...
	Grand Total of preceding year.	30,465	...	...	...	...	...	...	...
	Difference . .	+13,298	...	...	...	...	...	...	...

DIX I—*contd.*

AND MINERALS—*contd.*

No. 1—*contd.*

year 1938 at mines under the Indian Mines Act—*contd.*

daily in and about the mines.

	Open workings.							Total Underground and Open workings.	Surface.						Grand Total.
	Males.					Females.	Total Males and Females.		Males.				Females.	Total Males and Females.	
	Foremen and Mates.	Miners.	Other skilled labour.	Other unskilled labour.	Total Males.				Clerical and supervising staff.	Skilled labour.	Unskilled labour.	Total Males.			
VEL.															
for those for Stone.															
in those for Murum.															
in those for Stone.															
in those for Murum and Stone.															
in those for Stone.															
in those for Murum and Stone.															
In those for Stone.															
	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
RUM.															
in those for Stone.															
	6	...	...	81	87	19	106	106	2	...	27	29	58	87	193
in those for Stone.															
	6	...	...	81	87	19	106	106	2	...	27	29	58	87	193
in those for Stone.															
	6	...	...	81	87	19	106	106	2	...	27	29	58	87	193
	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	+6	...	...	+81	+87	+19	+106	+106	+2	...	+27	+29	+58	+87	+193

STATISTICS OF MINES

Table

Number of workers and output of minerals during the

Province.	District and Mineral field.	Total Output.	Average number of persons employed						
			Underground.						
			Males.					Females.	Total Males and Females.
			Foremen and Mates.	Miners.	Other skilled labour	Other unskilled labour.	Total Males.		
									FIRE
		Tons.							
Bengal . .	Birbhum . .	2,700	...	...	...	...	...	...	...
	Burdwan . .	7,184	...	...	12	6	18		18
	Total .	9,884	...	...	12	6	18	...	18
Bihar . .	Bhagalpur . .	2,108	1	10	...	26	37	...	37
	Manbhum . .	6,763	...	20	...	...	20	...	20
	Total .	8,871	1	30	...	26	57	..	57
Central Provinces.	Jubbulpore . .	27,652	...	...	...	...	...	...	...
	Grand Total (Fireclay) for 1938.	46,407	1	30	12	32	75	...	75
	Grand Total of preceding year.	33,332	...	...	...	...	...	...	...
	Difference .	+13,075	+1	+30	+12	+32	+75	...	+75
									CHINA
		Tons.							
Bihar . .	Bhagalpur . .	1,211	1	22	...	27	50	...	50
	Singhbhum . .	6,282	...	...	...	...	...	...	...
	Total .	7,493	1	22	...	27	50	...	50
Central Provinces.	Jubbulpore . .	250	...	...	...	...	...	...	...
Delhi . .	Delhi . . .	3,264	2	53	7	...	62	...	62

DIX I—*contd.*

AND MINERALS—*contd.*

No. 1—*contd.*

year 1938 at mines under the Indian Mines Act—*contd.*

daily in and about the mines.

Open workings.								Surface.						
Males.						Total Underground and Open workings.	Males.						Grand Total.
Foremen and Mates.	Miners.	Other skilled labour.	Other unskilled labour.	Total Males.	Females.	Total Males and Females.		Clerical and supervising staff.	Skilled labour.	Unskilled labour.	Total Males.	Females.	Total Males and Females.	
CLAY.														
1	70	35	...	106	30	136	136	1	...	...	1	...	1	137
2	60	7	...	69	37	106	124	8	...	25	33	23	56	180
3	130	42	...	175	67	242	260	9	...	25	34	23	57	317
...	...	...	...	...	...	...	37	4	...	...	4	18	22	59
3	69	7	4	83	35	118	138	7	3	12	22	12	34	172
3	69	7	4	83	35	118	175	11	3	12	26	30	56	231
6	5	...	173	184	173	357	357	3	...	32	35	...	35	392
12	204	49	177	442	275	717	792	23	3	69	95	53	148	940
9	98	31	159	297	208	505	505	6	...	46	52	15	67	572
+3	+106	+18	+18	+145	+67	+212	+287	+17	+3	+23	+43	+38	+81	+368
CLAY,														
6	30	...	40	76	...	76	126	1	...	...	1	39	40	166
18	98	2	142	260	384	644	644	30	30	149	209	163	372	1,016
24	128	2	182	336	384	720	770	31	30	149	210	202	412	1,182
...	22	...	...	22	38	60	60	1	...	...	1	...	1	61
...	13	...	...	13	...	13	75	...	....	...	...	...	...	75

Table

Number of workers and output of minerals during the

Province.	District and Mineral field.	Total Output.	Average number of persons employed						
			Underground.						
			Males.					Females.	Total Males and Females.
			Foremen and Mates.	Miners.	Other skilled labour.	Other unskilled labour.	Total Males.		
		Tons.							CL
Punjab . .	Jhelum . .	...	1	3	...	...	4	...	4
	Grand Total (China Clay) for 1938.	11,007	4	78	7	27	116	...	116
	Grand Total of preceding year.	11,024	6	46	9	45	106	...	106
	Difference	—17	—2	+32	—2	—18	+10	...	+10
Bengal . .	Burdwan . .	10,422	...	...	...	...	...	...	...
Punjab . .	Attock . . .	51,123	Figures included in those						
	Grand Total (Clay) for 1938.	61,565	...	...	...	...	...	...	...
	Grand Total of preceding year.	89,058	...	...	...	...	...	...	...
	Difference	—27,493	...	...	...	...	...	...	...
		Tons.							BARY
Madras . .	Guddapah .	3,080	...	...	...	...	...	...	...
	Kurnool .	200	1	8	...	2	11	...	11
	Grand Total (Barytes) for 1938.	3,280	1	8	...	2	11	...	11
	Grand Total of preceding year.	7,591	1	5	...	...	6	...	6
	Difference .	—4,311	..	+3	..	+2	+5	...	+5

DIX I—*contd.*

AND MINERALS—*contd.*

No. 1—*contd.*

year 1938 at mines under the Indian Mines Act—*contd.*

daily in and about the mines.

Open workings.								Surface.						
Males.								Males.						
Foremen and Mates.	Miners.	Other skilled labour.	Other unskilled labour.	Total Males.	Females.	Total Males and Females.	Total Underground and Open workings.	Clerical and supervising staff.	Skilled labour.	Unskilled labour.	Total Males.	Females.	Total Males and Females.	Grand Total.
AY.														
...	...	...	...	...	...	...	4	...	...	...	...	...	...	4
24	163	2	182	371	422	793	909	32	30	149	211	202	413	1,322
16	119	5	155	295	365	660	766	29	25	127	181	207	388	1,154
+8	+44	—3	+27	+76	+57	+133	+143	+3	+5	+22	+30	—5	+25	+168
2	50	20	9	81	21	102	102	...	3	...	3	...	3	105
for Limestone.														
2	50	20	9	81	21	102	102	...	3	...	3	...	3	105
3	38	...	9	50	22	72	72	...	3	...	3	...	3	75
—1	+12	+20	...	+31	—1	+30	+30	...	...	...	...	...	...	+30
TES.														
1	15	12	13	41	26	67	67	1	...	...	1	1	1	68
...	...	...	...	...	...	...	11	...	...	2	2	11	13	24
1	15	12	13	41	26	67	78	1	...	2	3	11	14	92
...	28	15	35	78	71	149	155	5	...	13	18	10	28	183
+1	—13	—3	—22	—37	—45	—82	—87	—4	...	—11	—15	+1	—14	—91

STATISTICS OF MINES

Table

Number of workers and output of minerals during the

Province.	District and Mineral field.	Total Output.	Average number of persons employed						
			Underground.						
			Males.					Females.	Total Males and Females.
			Foremen and Mates.	Miners.	Other skilled labour.	Other unskilled labour.	Total Males.		
		Tons.							APA
Madras . .	Trichinopoly . .	23							Figures included
	Total of preceding year.	166	...	...	...	...	...	...	...
	Difference .	—143	...	...	...	...	...	...	...
		Cwt.							ASBES
Rajputana .	Ajmer-Merwara .	54	...	...	...	...	...	...	...
	Total of preceding year.	9	...	...	...	...	..	...	...
	Difference .	+45	...	...	...	...	...	...	...
		Tons.							OCH
Central Provinces.	Chanda	186	1	4	..	...	5	...	5
	Jubbulpur . .	60	...	...	...	...	..	Figures included	
	Grand total (Ochre) for 1938.	246	1	4	...	...	5	...	5
	Grand total of preceding year.	112	1	4	...	...	5	...	5
	Difference ..	+134	...	...	...	...	...	...	...

DIX I—*contd.*

AND MINERALS—*contd.*

No. 1—*contd.*

year 1938 at mines under the Indian Mines Act—*contd.*

daily in and about the mines.

Open workings.								Surface.						
Males.								Males.						
Foremen and Mates.	Miners.	Other skilled labour.	Other unskilled labour.	Total Males.	Females.	Total Males and Females.	Total Underground and Open workings.	Clerical and supervising staff.	Skilled labour.	Unskilled labour.	Total Males.	Females.	Total Males and Females.	Grand Total.
TITE.														
in those for gypsum.														
...	...	...	..	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
TOS.														
1	..	...	3	4	...	4	4	...	...	...	...	...	...	4
1	...	...	3	4	...	4	4	...	...	...	...	...	...	4
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
RE.														
...	...	...	...	...	...	...	5	...	..	4	4	4	8	13
in those for China Clay.														
...	...	...	...	...	...	...	5	...	...	4	4	4	8	13
...	3	...	...	3	3	3	8	...	...	3	3	4	7	15
...	—3	...	...	—3	...	—3	—3	...	...	+1	+1	...	+1	- 2

APPEN

STATISTICS OF MINES

Table

Number of workers and output of minerals during the

Province.	District and Mineral field.	Total Output.	Average number of persons employed						
			Underground.						
			Males.					Females.	Total Males and Females.
			Foremen and Mates.	Miners.	Other skilled labour.	Other unskilled labour.	Total Males.		
									KYA
Bihar . .	Singhbhum . .	Tons. 830	...	...	...	...	...	...	...
Rajputana .	Ajmer-Merwara .	2	...	...	...	...	...	Figures included	
	Grand Total (Kyanite) for 1938.	832	...	...	...	...	...	...	...
	Grand Total of preceding year.	805	...	...	...	...	...	...	...
	Difference . .	+27	...	...	...	...	...	...	...
									GYP
Madras . .	Trichinopoly . .	Tons. 9,356	...	...	...	...	...	...	...
Punjab . .	Jhelum . .	13,886					Figures included in		
	Grand Total (Gypsum) for 1938.	23 242	...	...	...	...	...	...	...
	Grand Total of preceding year.	13,932	..	...	...	...	...	...	...
	Difference .	+9,310	...	...	...	...	...	...	...
									BAU
Bombay . .	Kaira . . .	Tons. ...	...	...	...	...	...	...	...
Central Provinces.	Jubbulpur . .	10,134	...	...	...	...	...	...	...
	Grand Total (Bauxite) for 1938.	10,134	...	...	...	...	...	...	...
	Grand Total of preceding year.	15,150	...	...	...	...	...	...	...
	Difference .	—5,016	...	...	...	...	...	...	...

DIX I—*contd.*

AND MINERALS—*contd.*

No. I—*contd.*

year 1938 at mines under the Indian Mines Act—*contd.*

daily in and about the mines.

Open workings.							Surface.						
Males.							Males.						
Foremen and Mates.	Miners.	Other skilled labour.	Other unskilled labour.	Total Males.	Females.	Total Males and Females.	Total Underground and Open workings.	Clerical and supervising staff.	Skilled labour.	Unskilled labour.	Total Males.	Females.	Total Males and Females.	Grand Total.
NITE.														
4	76	...	...	...	80	79	159	159	2	...	...	2	2	161
in those asbestos.				...	...	...	...	...	...	...	...	...	...	...
4	76	...	...	80	79	159	159	2	...	...	2	...	2	161
3	...	...	52	55	62	117	117	1	...	20	21	...	21	138
+1	+76	...	—52	+35	+17	+42	+42	+1	...	—20	—19	...	—19	+23
SUM.														
...	...	...	101	101	86	187	187	10	...	60	70	38	108	295
those for Salt.														
...	...	...	101	101	86	187	187	10	...	60	70	38	108	295
...	...	...	19	19	22	41	41	1	5	11	17	36	53	94
..	...	...	+82	+82	+64	+146	+146	+9	—5	+49	+53	+2	+55	+201
XITE.														
1	10	...	...	11	2	13	13	...	...	5	5	1	6	19
2	7	...	22	31	53	84	84	1	...	5	6	...	6	90
3	17	...	22	42	55	97	97	1	...	10	11	1	12	109
7	123	20	34	184	156	340	340	2	1	20	23	1	24	364
- 4	—106	—20	—12	—146	—101	—243	—243	—1	—1	—10	—12	...	—12	—255

APPEN

STATISTICS OF MINES

Table

Number of workers and output of minerals during the

Province.	District and Mineral field.	Total Output.	Average number of persons employed						
			Underground.						
			Males.					Females.	Total Males and Females.
			Foremen and Mates.	Miners.	Other skilled labour.	Other unskilled labour.	Total Males.		
		Tons.							BER
Rajputana .	Ajmer-Merwara .	17	...	...	...	...	...	...	...
	Total of preceding year.	27	...	...	...	...	...	...	...
	Difference .	—10	...	...	...	...	...	...	...
		Tons.							FELS
Rajputana .	Ajmer-Merwara .	605	...	...	...	...	...	...	...
	Total of preceding year.	268	...	...	...	...	...	...	...
	Difference .	+337	...	...	...	...	...	...	...
		Tons.							FULLERS
Central Provinces.	Jubbulpore . .	58						Figures included	
	Total of preceding year.	45						Figures included	
	Difference .	+13	...	...	...	...	...	...	

DIX I—*contd.*

AND MINERALS—*contd.*

No. 1—*contd.*

year 1938 at mines under the Indian Mines Act—*contd.*

daily in and about the mines.

Open workings.							Total Underground and Open workings.	Surface.						Grand Total.
Males.					Females.	Total Males and Females.		Males.				Females.	Total Males and Females.	
Foremen and Mates.	Miners.	Other skilled labour.	Other unskilled labour.	Total Males.				Clerical and supervising staff.	Skilled labour.	Unskilled labour.	Total Males.			
YL.														
2	23	...	...	...	...	25	25	2	...	...	2	...	2	27
3	35	1	...	39	2	41	41	2	1	...	3	...	3	44
—1	—12	—1	...	—39	—2	—16	—16	...	—1	...	—1	...	—1	—17
PAR.														
2	10	...	5	17	...	17	17	1	...	...	1	...	1	18
5	10	...	12	25	...	25	25	...	1	...	1	...	1	26
—3	...	...	—7	—8	...	—8	—8	+1e	—1	...	...	...	...	—8

EARTH.

in those for Limestone.

in those for Limestone.													
...	...		...	...	...	...	...	..	...	...	...	...	...

APPEN

STATISTICS OF MINES

Table

Number of workers and output of minerals during the

Provinces.	District and Mineral field.	Total Output.	Average number of persons employed						
			Underground.						
			Males.					Females.	Total Males and Females.
			Foremen and Mates.	Miners.	Other skilled labour	Other unskilled labour.	Total Males.		
		Tons.							
Central Provinces.	Betul . . .	20	...	...	...	...	...	...	...
	Total of preceding year.	10	...	...	...	...	...	...	...
	Difference .	+10	...	...	...	...	...	...	...
		Cwts.							
Madras . .	Salem . .	10	...	...	...	...	...	...	...
	Grand Total (Metalliferous Mines) for 1938.	...	1,006	10,534	2,490	6,425	20,455	...	20,456
	Grand Total of preceding year.	...	1,148	10,947	2,284	6,232	20,511	15	20,526
	Difference	...	—42	—413	+206	+193	—56	—15	—71
	Grand Total (All Minerals) for 1938.	...	...	...	...	...	140,651	...	140,651
	Grand Total of preceding year.	...	...	...	...	...	118,920	3,887	122,807
	Difference .	...	...	...	...	...	+21,731	-3,887	+17,844

GRAPH

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DIX I—*contd.*

AND MINERALS—*concld.*

No. 1—*concld.*

year 1938 at mines under the Indian Mines Act—*concld.*

daily in and about the mines.

	Open workings.								Surface.						
	Males.								Males.						
	Foremen and Mates.	Miners.	Other skilled labour.	Othe unskilled labour.	Total Males.	Females.	Total Males and Females.	Total Underground and Open workings.	Clerical and supervising staff.	Skilled labour.	Unskilled labour.	Total Males.	Females.	Total Males and Females.	Grand Total.
ITE.															
	1	2	...	4	7	...	7	7	...	...	...	...	...	...	7
	...	...	...	2	2	5	7	7	...	...	2	2	5	7	14
	+1	+2	...	+2	+5	—5	...	...	...	...	—2	—2	—5	—7	—7
DUM.															
	...	...	2	...	2	12	14	14	...	...	...	...	...	...	14
	1,894	23,749	4,144	11,452	41,239	23,271	64,510	84,965	2,236	4,067	7,456	13,699	6,503	20,202	105,167
	1,762	21,341	3,832	10,586	37,521	19,661	57,182	77,706	2,007	3,649	7,625	13,281	5,720	19,001	96,709
	+132	+2,408	+312	+866	+3,718	+3,610	+7, 28	+7,257	+229	+358	—169	+418	+783	+1,201	+8,458
	...	...	...	...	84,121	29,212	83,333	223,984	...	...	...	58,195	24,077	82,276	306,260
	...	...	...	...	48,268	24,479	72,747	195,554	...	...	...	52,387	19,917	72,304	267,858
	...	...	...	...	+5,853	+4,733	+10,586	+28,430	...	...	...	+5,812	+4,160	+9,972	+38,402

APPEN

Table

Statement of total mining population in Coal Mines in British India

Name of Province.	Name of Coalfield or District.	Total number attending work.							
		Males.				Females.			Total Males and Females.
		Under-ground.	Open working.	Surface.	Total.	Open working.	Surface.	Total.	
		Tons.							
Assam	Khasi and Jaintia.	43	...	71	114	...	41	41	155
	Makum	1,546	47	443	2,036	23	125	148	2,184
	Nazira	272	...	166	438	...	...	...	438
	Total	1,861	47	680	2,588	23	166	189	2,777
Baluchistan	Sor Range	129	2	2	133	...	...	...	133
	Khost	90	...	3	93	...	...	...	93
	Total	219	2	5	226	...	...	...	226
Bengal	Raniganj	51,303	301	12,378	63,982	155	6,654	6,809	70,791
Bihar	Raniganj	8,450	270	1,767	10,487	190	1,092	1,282	11,769
	Jharia	71,957	2,604	20,420	94,981	2,250	10,487	12,737	107,718
	Bokaro	4,000	5,505	1,925	11,430	3,125	560	3,685	15,115
	Giridih	6,741	7	1,037	7,785	8	541	549	8,334
	Karanpura	2,301	1,432	950	4,683	517	292	809	5,492
	Jainty	636	...	198	834	...	32	32	866
	Daltonganj	119	...	50	169	...	10	10	179
	Total	94,204	9,818	26,347	130,369	6,090	13,014	19,104	149,473
Central Provinces	Betul	53	...	52	105	...	22	22	127
	Wardha Valley	2,471	...	519	2,990	...	171	171	3,161
	Pench Valley	8,305	678	2,485	11,468	654	1,208	1,862	13,330
	Yeotmal	273	...	102	375	...	20	20	395
	Total	11,102	678	3,158	14,938	654	1,421	2,075	17,013
Orissa	Hingir-Rampur	378	...	89	467	...	73	73	540
Punjab	Salt Range	2,156	37	996	3,189	...	22	22	3,211
	Grand Total	161,223	10,883	43,653	215,759	6,922	21,350	28,272	244,031

DIX 1—*contd.*

No. 1-A.

on a day in the selected week in February 1939.

Total number prevented from attending.								
Males.				Females.			Total Males and Females.	Grand Total.
Under-ground.	Open working.	Surface.	Total.	Open working.	Surface.	Total.		
18	...	18	36	...	8	8	44	199
946	16	86	1,048	17	57	74	1,122	3,306
72	...	47	119	...	...	...	119	557
1,036	16	151	1,203	17	65	82	1,285	4,062
...	...	...	...	...	...	...	...	133
...	...	...	...	...	...	...	...	93
...	...	...	...	...	...	...	...	226
4,874	10	781	5,665	9	614	623	6,288	77,079
290	33	155	478	30	65	95	573	12,342
2,668	73	498	3,239	47	368	415	3,654	111,372
154	540	308	1,002	261	28	289	1,291	16,406
4,186	...	167	4,353	...	90	90	4,443	12,777
447	229	53	729	52	15	67	796	6,288
41	...	...	41	...	...	...	41	907
26	...	13	39	...	...	2	41	220
7,812	875	1,194	9,881	390	568	958	10,839	160,312
6	...	2	8	...	...	...	8	135
115	...	13	128	...	7	7	135	3,296
661	34	133	828	29	88	117	945	14,275
14	...	2	16	...	3	3	19	414
796	34	150	980	29	98	127	1,107	18,120
...	...	...	...	...	...	...	...	540
143	...	70	213	...	...	...	213	3,424
14,661	935	2,346	17,942	445	1,345	1,790	19,732	263,763

APPEN

Table

Average hours worked per week in

Mineral Field.	Underground.				
	Overmen and Sirdars. — Foremen and Mates.	Miners.	Loaders.	Skilled Labour.	Unskilled Labour.
Jharia Coalfield (Bihar)	48	45	45	47	47
Raniganj „ (Bengal)	50	46	46	48	48
Giridih „ (Bihar)	44	43	42	46	46
Assam Coalfields	47	46	48	46	48
Punjab „	45	42	43	43	44
Baluchistan „	38	38	38	40	...
Pench Valley Coalfield (Central Provinces)	50	48	49	50	50
Bihar Mica	45	45	...	47	46
Madras Mica	47	46	...	46	46
Central Provinces Manganese	49	48	...	49	49
Central Provinces Limestone	...	...	...	...	...
Bihar Iron	...	...	...	...	...
Punjab Salt	39	48	...	51	48
Bihar China Clay	40	36	...	...	30
Punjab Slate	...	...	...	...	...

DIX I—*contd.*

No. 2.

each important mining field during the year 1938.

Open workings.						Surface.			
Overmen and Sirdars. Foremen and Mates.	Miners.	Loaders.	Skilled Labour.	Unskilled Labour.	Females.	Clerical and Supervising Staff.	Skilled Labour.	Unskilled Labour.	Females.
48	46	47	48	48	47	52	50	50	49
50	48	48	48	48	48	52	50	50	49
50	51	...	48	48	44	49	48	48	47
46	52	46	46	52	46	50	51	51	51
48	...	48	48	48	...	50	47	44	48
...	...	48	48	...	...	...	48	44	...
50	51	51	51	51	51	52	50	51	50
43	43	...	45	45	42	46	47	48	49
46	45	...	47	47	47	46	46	46	46
47	46	..	49	44	45	49	47	43	44
49	49	...	51	49	47	49	50	49	48
48	48	...	48	48	48	49	48	48	48
54	...	...	...	54	...	51	48	49	...
46	44	...	45	44	44	44	44	43	42
41	39	...	41	43	...	48	48	48	...

APPEN

Table

Analysis of figures relating to

Province.	Coalfield.	Coal.					
		Opening stocks.	Raisings.	Total.	Despatches.	Colliery consumption.	Coal delivered for coking.
		Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
Assam	Khasi & Jaintia Hills.	1,637	5,632	7,269	5,632	...	...
	Makum	...	232,904	232,904	219,788	10,827	2,289
	Nazira	...	28,764	28,764	28,153	445	...
Baluchistan	Baluchistan	518	14,388	14,906	13,533	87	...
Bengal (and part of Bihar)	Raniganj	151,675	8,650,920	8,802,595	7,770,566	521,330	60,452
Bihar	Jharia	558,010	11,144,462	11,702,472	8,026,724	696,299	1,340,906
	Bokaro	3,994	2,007,016	2,011,010	1,929,093	53,679	17,137
	Karanpura	17,566	625,914	643,480	582,201	19,860	...
	Giridih	79,438	636,371	715,809	679,964	32,022	...
	Jainty	3,711	42,900	46,611	34,460	6,027	...
	Daltonganj	...	393	393	...	225	
Central Provinces.	Betul	1,057	5,288	6,345	3,423	2,735	...
	Pench Valley	12,590	1,369,208	1,381,798	1,283,482	72,525	...
	Wardha Valley	677	279,353	280,030	260,694	15,717	...
	Yeotmal	...	4,777	4,777	1,953	2,822	...
Orissa	Hingir-Rampur	2,278	44,425	46,698	40,301	3,677	...
Punjab	Salt Range	3,345	184,028	187,373	176,400	4,295	...
	Total 1938	836,491	25,276,743	26,113,234	21,056,367	1,442,572	1,420,784

DIX I—*contd.*

No. 3.

the output of Coal and Coke, 1938.

		Coke.									
Coal despatched to coke factories.	Closing stocks.	Opening stocks.		Coke made.		Despatches.		Colliery consumption.		Closing stocks.	
		Hard.	Soft.	Hard.	Soft.	Hard.	Soft.	Hard.	Soft.	Hard.	Soft.
Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
...	1,637	...	...	...	...	...	...	...	...	...	...
...	...	...	...	492	...	443	...	49	...	...	...
...	166	...	...	...	...	...	...	...	...	...	...
...	1,286	...	...	...	...	...	...	...	...	...	...
68,543	450,247	149	899	3,900	38,583	3,824	38,285	20	452	205	745
1,490,438	1,638,543	3,570	13,171	94,422	857,571	89,092	846,612	648	3,933	8,552	20,197
2,560	11,101	41	6	5,030	4,769	4,317	4,774	54	...	700	1
...	41,419	...	...	...	...	...	...	...	...	...	...
65,536	3,823	...	...	...	...	...	...	...	...	...	...
...	6,124	...	...	...	...	...	...	...	...	...	...
...	168	...	...	...	...	...	...	...	...	...	...
...	187	...	...	...	...	...	...	...	...	...	...
...	25,791	...	...	...	...	...	...	...	...	...	...
...	3,619	...	...	...	...	...	...	...	...	...	...
...	2	...	...	...	...	...	...	...	...	...	...
...	2,720	...	...	...	...	...	...	...	...	...	...
...	6,678	...	...	...	...	...	...	...	...	...	...
1,627,077	2,193,511	4,060	14,076	103,844	900,923	97,676	889,671	771	4,385	9,457	20,943

APPENDIX I—*contd.*

Table No. 4.

Number of mines opened, closed and inspected, during the year 1938.

Province.	District and Mineral field.	Number of mines under the scope of the Act.	Number of mines				Inspections.	
			Worked under mechanical power.	Not worked by mechanical power.	Opened during the year.	Closed during the year.	Number of mines inspected.	Number of inspections.
			COAL.					
Assam	Khasi and Jaintia Hills	1	...	1	...	...	1	1
	Lakhimpur—Makum Coalfield	5	5	...	1	...	3	17
	Naga Hills—Nazira Coalfield	1	...	1	...	...	1	9
Baluchistan	Baluchistan Coalfield	21	...	21	10	8	9	12
Bengal (and part of Bihar).	Raniganj Coalfield	241	162	79	31	33	252	929
Bihar	Jharia Coalfield	272	175	97	34	31	277	1,408
	Bokaro Coalfield	9	5	4	4	...	5	20
	Karanpura Coalfield	7	4	3	2	2	3	7
	Giridih Coalfield	7	3	4	2	1	6	30
	Jainty Coalfield	9	1	8	3	4	7	7
	Daltonganj Coalfield	1	1	...	1	...	...	...
Central Provinces.	Betul	1	1	...	...	...	1	2
	Pench Valley Coalfield	27	22	5	1	2	25	59
	Wardha Valley Coalfield	7	7	...	1	1	6	12
	Yeotmal	1	1	...	1	...	1	1
Orissa	Hingir-Rampur Coalfield	1	1	...	...	...	1	1

APPENDIX I—*contd.*

Table No. 4—*contd.*

Number of mines opened, closed and inspected, during the year 1938—*contd.*

Province.	District and Mineral field.	Number of mines under the scope of the Act.	Number of mines: Worked under mechanical power.	Number of mines: Not worked by mechanical power.	Number of mines: Opened during the year.	Number of mines: Closed during the year.	Inspections: Number of mines inspected.	Inspections: Number of inspections.
			COAL—*contd.*					
Punjab	Attock	1	...	1	1	1	...	...
	Salt Range Coalfield	52	...	52	23	28	20	31
Sind	Dadu	1	...	1	...	1	...	...
	Grand Total (Coal) for 1938	665	388	277	115	112	618	2,546
	Grand Total of preceding year.	604	368	236	146	55	604	2,566
	Difference	+61	+20	+41	—31	+57	+14	—20
			IRON ORE.					
Bihar	Singhbhum	7	...	7	2	...	2	3
	Palamau	1	...	1	...	1	...	...
	Grand Total (Iron Ore) for 1938	8	...	8	2	1	2	3
	Grand Total of preceding year.	5	...	5	1	...	3	8
	Difference	+3	...	+3	+1	+1	—1	—5
			MANGANESE ORE.					
Bihar	Singhbhum	16	...	16	1	3	...	...
Bombay	North Kanara	3	...	3	1	...	...	...
	Panch Mahals	2	2	...	...	...	...	...

APPENDIX I—*contd.*

Table No. 4—*contd.*

Number of mines opened, closed and inspected, during the year 1938—*contd.*

Province.	District and Mineral field.	Number of mines under the scope of the Act.	Number of mines.				Inspections.	
			Worked under mechanical power.	Not worked by mechanical power.	Opened during the year.	Closed during the year.	Number of mines inspected.	Number of inspections.
			MANGANESE ORE—*contd.*					
Central Provinces.	...	91	3	88	25	32	49	51
Madras	...	14	1	13	3	7	6	6
	Grand Total (Manganese Ore) for 1938.	126	6	120	30	42	55	57
	Grand Total of preceding year	98	6	92	46	6	56	58
	Difference	+28	...	+28	—16	+36	—1	—1
			GOLD.					
Bihar	...	3	...	3	1	1	...	...
	Total of preceding year	3	...	3	1	1	1	2
	Difference	...	...	...	...	...	—1	—2
			CHROMITE ORE.					
Baluchistan	...	39	...	39	...	...	7	7
Bihar	...	13	...	13	1	...	4	4
	Grand Total (Chromite Ore) for 1938.	52	...	52	1	...	11	11
	Grand Total of preceding year	53	...	53	4	...	19	19
	Difference	—1	...	—1	—3	...	—8	—8

APPENDIX I—*contd.*

Table No. 4—*contd.*

Number of mines opened, closed and inspected, during the year 1938—*contd.*

Province.	District and mineral field.	Number of mines under the scope of the Act.	Number of mines				Inspections.	
			Worked under mechanical power.	Not worked by mechanical power.	Opened during the year.	Closed during the year.	Number of mines inspected.	Number of inspections.
			COPPER ORE.					
Bihar . .	Singhbhum . . .	5	5	...	...	1	8	5
	Total of preceding year . .	5	...	5	2	...	2	6
	Difference .	...	+5	—5	—2	+1	+1	—1
			MICA.					
Bihar . .	... .	689	26	663	241	206	88	93
Madras .	... .	119	14	105	39	29	72	72
Rajputana .	. . . . .	31	...	31	20	19	...	...
	Grand Total (Mica) for 1938 .	839	40	799	300	254	160	165
	Grand Total of preceding year	909	47	862	451	324	244	254
	Difference .	—70	—7	—63	—151	—70	—84	—89
			SALT.					
Punjab .	... .	3	1	2	...	...	3	6
	Total of preceding year .	3	1	2	...	...	8	8
	Difference .	...	...	...	...	...	...	—2

APPENDIX I—*contd.*

Table No. 4—*contd.*

Number of mines opened, closed and inspected, during the year 1938—*contd.*

Province.	District and Mineral field.	Number of mines under the scope of the Act.	Number of mines				Inspections.	
			Worked under mechanical power.	Not worked by mechanical power.	Opened during the year.	Closed during the year.	Number of mines inspected.	Number of inspections.
				MAGNESITE.				
Madras . .	Salem	3	...	3	1	...	2	2.
	Total of preceding year .	3	...	3	...	1	2	3
	Difference .	...	...	...	+1	—1	...	—1
				STEATITE.				
Bihar	... .	3	...	3	...	1	...	...
Central Provinces.	... .	2	...	2	...	1	3	4
Madras . .	... .	1	...	1	...	...	1	1
United Provinces.	... .	13	...	13	7	13	13	13
	Grand Total (Steatite) for 1938	19	...	19	7	15	17	18
	Grand Total of preceding year	23	...	23	10	9	24	25
	Difference .	—4	...	—4	—3	+6	—7	—7

APPENDIX I—*contd.*

Table No. 4—*contd.*

Number of mines opened, closed and inspected, during the year 1938—*contd.*

Province.	District and Mineral field.	Number of mines under the scope of the Act.	Number of mines.				Inspections.	
			Worked under mechanical power.	Not worked by mechanical power.	Opened during the year.	Closed during the year.	Number of mines inspected.	Number of inspections
					SLATE.			
Bihar	Monghyr	3	...	3	1	2	...	...
Punjab . .	... .	11	...	11	...	3	14	14
	Grand Total (Slate) for 1938 .	14	...	14	1	5	14	14
	Grand Total of preceding year .	19	...	19	3	3	20	20
	Difference .	—5	...	—5	—2	+2	—6	—6
					LIMESTONE.			
Bihar . .	... .	16	...	16	2	...	11	12
Central Provinces.	... .	17	1	16	...	5	8	8
Madras . .	... .	1	...	1	...	...	2	2
Punjab . .	... .	3	1	2	...	...	4	4
	Grand Total (Limestone) for 1938.	37	2	35	2	5	25	26
	Grand Total of preceding year.	37	3	34	6	5	38	43
	Difference .	...	—1	+1	—4	...	—13	—17

APPENDIX I—*contd.*

Table No. 4—*contd.*

Number of mines opened, closed and inspected, during the year 1938—*contd.*

Province.	District and Mineral field.	Number of mines under the scope of the Act.	Number of mines: Worked under mechanical power.	Number of mines: Not worked by mechanical power.	Number of mines: Opened during the year.	Number of mines: Closed during the year.	Inspections: Number of mines inspected.	Inspections: Number of inspections.
		STONE.						
Bengal	...	3	...	3	...	...	...	...
Bihar	...	60	...	60	9	2	8	8
Bombay	...	22	1	21	2	4	33	33
Central Provinces.	...	3	...	3	...	...	...	...
Delhi	Delhi	1	...	1	...	...	4	5
Madras	...	12	1	11	3	...	23	25
Punjab	...	5	...	5	1	1	6	6
Sindh	...	1	...	1	...	...	...	...
United Provinces.	...	16	...	16	3	4	...	...
	Grand Total (Stone) for 1938	123	2	121	18	11	74	77
	Grand Total of preceding year	108	3	105	21	10	159	171
	Difference	+15	—1	+16	—3	+1	—85	—94

APPENDIX I—*contd.*

Table No. 4—*contd.*

Number of mines opened, closed and inspected, during the year 1938—*contd.*

Province.	District and Mineral field.	Number of mines under the scope of the Act.	Number of mines: Worked under mechanical power.	Number of mines: Not worked by mechanical power.	Number of mines: Opened during the year.	Number of mines: Closed during the year.	Inspections: Number of mines inspected.	Inspections: Number of inspections.
			SANDSTONE.					
Bihar	Shahabad	2	...	2	...	...	...	...
	Grand Total of preceding year.	2	...	2	...	...	8	8
	Difference	...	...	...	...	...	—8	—8
			FIRE CLAY.					
Bengal	... .	5	...	5	1	2	2	2
Bihar	... .	9	...	9	4	3	6	7
Central Provinces.	... .	3	1	2	...	...	2	2
	Grand Total (Fire Clay) for 1938	17	1	16	5	5	10	11
	Grand Total of preceding year.	10	2	8	1	...	11	13
	Difference .	+7	—1	+8	+4	+5	—1	—2

APPENDIX I—*contd.*

Table No. 4—*contd.*

Number of mines opened, closed and inspected, during the year 1938—*contd.*

Province.	District and Mineral field.	Number of mines under the scope of the Act.	Number of mines: Worked under mechanical power.	Number of mines: Not worked by mechanical power.	Number of mines: Opened during the year.	Number of mines: Closed during the year.	Inspections: Number of mines inspected.	Inspections: Number of inspections.
				CHINA CLAY				
Bihar	...	8	..	8	2	1	1	2
Central Provinces.	...	1	...	1	...	...	...	...
Delhi	...	6	...	6	5	5	2	2
Punjab	..	1	...	1	...	...	...	...
	Grand Total (China Clay) for 1938.	16	...	16	8	7	3	4
	Grand Total of preceding year	15	...	15	8	6	17	23
	Difference	+1	...	+1	...	+1	—14	—19
				CLAY.				
Bengal	Burdwan	2	1	1	...	...	3	3
	Total of preceding year	3	1	2	1	1	4	4
	Difference	—1	...	—1	—1	—1	—1	—1
				BARYTES.				
Madras	...	3	...	3	...	...	...	...
	Total of preceding year	5	...	5	2	...		5
	Difference	2	...	—2	—2	...	—5	—2

APPENDIX I—*contd.*

Table No. 4—*contd.*

Number of mines opened, closed and inspected, during the year 1938—*contd.*

Province.	District and Mineral field.	Number of mines under the scope of the Act.	Number of mines: Worked under mechanical power.	Number of mines: Not worked by mechanical power.	Number of mines: Opened during the year.	Number of mines: Closed during the year.	Inspections: Number of mines inspected.	Inspections: Number of inspections.
					CORUNDUM.			
Madras	...	1	...	1	1	...	...	...
	Total of preceding year	...	...	...	...	...	...	...
	Difference	+1	...	+1	+1	...	...	...
					ASBESTOS.			
Rajputana	...	1	...	1	...	...	...	...
	Total of preceding year	1	...	1	1	...	...	...
	Difference	...	...	...	—1	...	...	...
					OCHRE.			
Central Provinces.	...	1	...	1	...	...	...	...
	Total of preceding year	1	...	1	1	...	...	...
	Difference	...	...	...	—1	...	...	...

APPENDIX I—*contd.*

Table No. 4—*contd.*

Number of mines opened, closed and inspected, during the year 1938—*contd.*

Province.	District and Mineral field.	Number of mines under the scope of the Act.	Number of Mines.				Inspections.	
			Worked under mechanical power.	Not worked by mechanical power.	Opened during the year.	Closed during the year.	Number of mines inspected.	Number of inspections.
				GYPSUM.				
Madras . .	... .	2	...	2	...	...	...	...
	Total of preceding year . .	4	...	4	1	1	...	...
	Difference .	−2	...	−2	−1	−1	...	...
				BERYL.				
Rajputana .	... .	2	...	2	...	1	...	...
	Total of preceding year . .	3	...	3	1	1	2	2
	Difference .	−1	...	−1	−1	...	−2	−2
				GRAPHITE.				
Central Provinces.	... .	1	...	1	1	1	...	...
Madras .	... .	1	...	1	...	...	...	...
	Grand Total (Graphite) for 1938	2	...	2	1	1	...	...
	Grand Total of preceding year .	1	...	1	...	...	1	1
	Difference .	+1	...	+1	+1	+1	−1	−1
				BAUXITE.				
Bombay .	... .	1	...	1	...	...	...	...
Central Provinces.	... .	2	...	2	...	...	...	...
	Grand Total (Bauxite) for 1938	3	...	3	...	...	...	...
	Grand Total of preceding year .	3	...	3	1	...	5	5
	Difference .	...	...	...	−1	...	−5	−5

APPENDIX I—*contd.*

Table No. 4—*concld.*

Number of mines opened, closed and inspected, during the year 1938—*concld.*

Province.	District and Mineral field.	Number of mines under the scope of the Act.	Number of mines				Inspections.	
			Worked under mechanical power.	Not worked by mechanical power.	Opened during the year.	Closed during the year.	Number of mines inspected.	Number of inspections.
				FELSPAR.				
Rajputana	...	2	...	2	...	...	2	2
	Total of preceding year	3	...	3	1	1	2	2
	Difference	—1	...	—1	—1	—1	..	...
				KYANITE.				
Bihar	...	1	...	1	...	...	...	...
	Total of preceding year	1	...	1	1	...	...	...
	Difference	...	...	...	—1	...	...	...
				MURRUM.				
Bombay	...	1	...	1	...	...	...	...
	Total of preceding year	...	...	...	...	...	...	...
	Difference	+1	...	+1	...	...	...	...
	Grand Total (Metalliferous Mines) for 1938.	1,288	58	1,230	378	349	390	411
	Grand Total of preceding year	1,321	63	1,258	564	371	626	680
	Difference	—33	—5	—28	—186	—22	—236	—269
	Grand Total (All Minerals) for 1938.	1,953	446	1,507	493	461	1,008	2,957
	Grand Total of preceding year	1,925	431	1,494	710	426	1,230	3,246
	Difference	+28	+15	+13	—217	+35	—222	—289

APPENDIX I—*contd.*

Table No. 5.

The following table shows the fluctuations in the output of the principal minerals raised from mines classed under the Indian Mines Act. The other minerals raised are apatite, asbestos, barytes, bauxite, beryl, chinaclay, clay, felspar, fireclay, fuller's earth, graphite, gypsum, kyanite, magnesite, ochre, slate, stone, and steatite.

Year.	Coal.	Manganese ore.	Mica.	Limestone.	Salt.	Gold.	Copper ore.	Wolfram ore.	Iron ore.	Chromite ore.	Tin ore.	Lead ore.	Silver.
	Tons.	Tons.	Cwts.	Tons.	Tons.	Troy ozs.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Troy ozs.
1929	22,308,174	750,908	49,437	1,313,647	148,496	30	76,831	1,061	1,436,385	21,054	3,384	404,561	7,280,517
1930	22,683,861	623,678	52,519	1,148,312	147,276	30	123,749	1,500	1,132,893	30,488	3,001	530,119	7,054,200
1931	20,514,597	347,373	46,177	863,236	134,916	..	153,036	969	590,176	14,938	2,552	397,679	5,000,400
1932	18,719,587	88,119	32,643	725,378	150,286	50	175,375	848	673,434	7,866	2,057	372,586	5,998,956
1933	18,160,681	53,240	41,035	1,120,110	145,838	267	201,722	836	658,239	9,770	3,309	454,791	6,054,069
1934	20,243,977	221,282	55,555	949,860	154,955	858	328,676	1,333	834,477	9,356	3,690	443,489	5,702,033
1935	21,014,469	422,847	58,553	1,000,308	150,515	1,255	350,801	2,549	1,179,050	19,039	4,383	460,886	5,825,028
1936	20,583,982	624,830	82,077	1,007,057	151,523	1,376	357,194	3,140	1,401,530	28,142	4,664	468,842	5,052,000
1937	22,335,528	800,280	94,811	1,318,598	163,813	26	371,458	...*	1,587,362	35,387	...*	...*	...*
1938	25,276,743	766,341	101,633	1,382,058	164,674	16	288,076	...*	1,421,090	27,086	...*	...*	...*

* The production in previous years was from Burma.

Table No. 6.

The following table shows the amount of coal raised, the average number of persons working daily and the death-rates during the years 1929-1938 in respect of coal mines under the Indian Mines Act :—

Year.	Amount of coal raised.	Average number of persons working daily below and above ground.	Number of deaths below and above ground.	Death-rates.	
				Per 1,000,000 tons raised.	Per 1,000 persons working daily below and above ground.
1929	22,308,174	165,658	194	8·70	1·17
1930	22,683,861	169,001	211	9·30	1·25
1931	20,514,597	158,267	185	9·02	1·17
1932	18,719,587	148,469	151	8·07	1·02
1933	18,160,681	144,707	124	6·83	0·86
1934	20,243,977	151,375	157	7·76	1·04
1935	21,014,469	159,254	264	12·56	1·66
1936	20,583,982	162,917	420	20·40	2·58
1937	22,335,528	171,149	200	8·95	1·17
1938	25,276,743	201,093	248	9·81	1·23

APPENDIX I—*contd.*

Table No. 7.

Aggregate horse power and purpose for use of electric motors installed both on surface and underground at Coal Mines under the Indian Mines Act.

Coalfield.	Horse power on surface.						Horse power below ground.					Total horse power of motors installed.
	Winding.	Ventilation.	Haulage.	Coal washing or cleaning.	Miscellaneous.	Total.	Haulage.	Pumping.	Portable machinery.	Miscellaneous.	Total.	
Assam . . .	...	117	125	7	245	494	180	...	...	...	180	674
Bokaro . . .	200	195	495	85	1,174	2,149	365	702	140	...	1,207	3,356
Central Provinces .	...	105	100	25	166	396	331	1,180	291	50	1,852	2,248
Giridih . . .	165	388	...	270	448	1,271	779	4,208	160	2	5,149	6,420
Jharia . .	3,123	1,220	2,347	1,160	2,053	9,903	8,330	23,865	3,303	2,224	38,231	48,134
Karanpura . .	...	75	785	95	377	1,332	85	410	100	...	595	1,927
Punjab . .	...	...	120	...	23	143	...	...	...	...	...	143
Raniganj . . .	2,455	1,962	526	1,327	1,771	8,041	8,479	13,680	4,585	390	27,134	35,175
Total .	5,943	4,062	4,498	2,969	6,257	23,729	19,058	44,045	8,579	2,666	74,348	98,077

Table No. 8.

Number of Mines under the Indian Mines Act, where electric power is used and the aggregate horse power of electric motors installed.

Province.	Minerals worked.				Total horse power of motors installed.
	Coal.		Sundry Minerals.		
	Number of mines.	Horse power.	Number of mines.	Horse power.	
Assam	2	674	...	...	674
Bengal	49	30,088	1	58	30,146
Bihar	74	64,924	9	4,546	69,470
Bombay	...	...	1	166	166
Central Provinces and Berar . . .	10	2,248	4	564	2,812
Madras	...	...	4	596	596
Punjab	1	143	2	1,821	1,964
Total .	136	98,077	21	7,751	105,828

APPENDIX I—*contd.*

Table No. 9.

Number and type of coal-cutting machines at work in Coal Mines under the Indian Mines Act.

Name of machine.	Chain.	Bar.	Percussive.	Power.		Total number of machines.
				A. C.	D. C.	
Diamond	1	...	...	1	...	1
Goodman	86	...	...	72	14	86
Hardy	...	...	3	3	...	3
Mavor and Coulson	49	38	...	86	1	87
Siskol	...	...	4	4	...	4
Sullivan	5	...	...	5	...	5
Total	141	38	7	171	15	186

Jharia coalfield	53 machines	Total number of square feet undercut—8,827,200.
Raniganj coalfield	115 ,,	
Giridih coalfield	2 ,,	
Karanpura coalfield	3 ,,	
Bokaro coalfield	3 ,,	
Central Provinces coalfield	10 ,,	

Table No. 10.

Number of mechanical ventilators in use at Coal Mines under the Indian Mines Act in 1938.

Assam.	Baluchistan.	Bengal.	Bihar.	Central Provinces.	Orissa.	Punjab.	Total.
9	...	41	65	11	...	2	128

APPENDIX I—*concld.*

Table No. 11.

Safety lamps in use at Coal Mines under the Indian Mines Act.

Name of manufacturer.	Number in use in							
	Assam.	Baluchistan.	Bengal.	Bihar.	Central Provinces.	Orissa.	Punjab.	Total.
Electric.								
Ceag	344	...	983	2,620	...	...	...	3,947
Concordia	...	...	2,564	1,102	...	...	...	3,666
Flame type.								
Davies	392	...	5,062	4,640	8	...	5	10,107
Hailwood	1,139	...	1,900	12,307	...	...	...	15,346
Naylor	...	...	1	241	...	...	...	242
Patterson	...	...	89	945	...	...	...	1,034
Premier	...	...	8	1,017	...	...	3	1,028
Thomas Williams	...	...	6,090	5,052	...	...	...	11,142
Wolfe	...	8	...	...	...	...	...	8
Total	1,875	8	16,697	27,924	8	...	8	46,520

5,240 were locked by lead rivets and 41,280 by magnetic means.

Table No. 12.

Statement of explosives used during the year 1938 at mines under the Indian Mines Act.

Name of explosives.	Quantity of explosives used, in lb., in						
	Coal mines.	Mica mines.	Manganese mines.	Limestone mines.	Stone mines.	Other mines.	Total.
Dynamite	4,714	19,076	28,798	50	3,348	439	56,425
Gelignite	89,074	248,360	82,119	7,655	4,007	362,499	793,714
Monobel	...	...	...	2,190	...	...	2,190
Monobel A-2	58,833	...	...	...	...	...	58,833
Stonobel	204,836	...	...	...	...	...	204,836
Dynobel	749	...	...	...	...	...	749
Raunkol	25,713	...	...	...	...	...	25,713
Liquid Oxygen	125,346	...	...	...	...	...	125,346
Gunpowder	3,479,883	9,933	140,057	479,079	184,938	420,511	4,714,401
Picric Powder	...	...	...	...	3,090	...	3,090
Number of detonators used	1,085,923	1,919,067	619,765	8,025	34,693	637,463	4,304,936

APPENDIX II.

ACCIDENTS IN MINES.

Table No. 1.

Fatal Accidents during the year 1938.

Serial number.	Date and hour of accident.	Name and situation of mine.	Name of owner.	Name, sex, age and occupation of person killed.	Name of mineral worked.	Cause of accident and remarks.
		FALLS OF ROOF AND SIDES.				
		(a) Falls of roof—(*104 deaths*).				
1	1st January, 11-30 A.M.	Chowrassie mine, Dishergarh P. O., Bihar.	Equitable Coal Co., Ltd.	Mangal Kora, (*m.*), 35, *Coal-cutter.*	Coal .	Two miners left their appointed working place, broke down a fence, and entered a goaf to extract some fallen coal, when a mass of stone, 8′ × 4′ × 1′, fell from the roof. One of them was killed instantly and the other sustained slight injuries. Inspection and inquiry made.
2	2nd January, 3-30 A.M.	Banksimula mine, Charanpur P. O., Bengal	Bengal Coal Co., Ltd.	Hira Kahar, (*m.*), 40, *Coal-cutter.* Newal Koiri, (*m.*), 32, *Loader.*	Coal .	In a depillaring area a gang of miners and loaders was at work in a gallery 15 feet high, when a mass of roof-stone, about 15′ × 2′ thick, suddenly fell, killing two of them and seriously injuring two others. A pronounced cleat in the roof was exposed after the fall. Inspection and inquiry made.
3	2nd January, 3 P.M.	Makerwal mine, Trag P. O., Punjab.	R. S. Lala Isher Das Kapur and Mr. C. Bevan-Petman.	Abizar, (*m.*), 25, *Coal-cutter.*	Coal .	A miner was working at the face of gallery, when a small piece of stone fell from the roof from a height of 6 feet. He sustained slight injuries to his right foot and died of tetanus 15 days after the accident. Inspection and inquiry made.
4	3rd January, 12-15 P.M.	Ghorawari mine, Junnardeo P. O., Central Provinces.	Hirdagarh Collieries, Ltd.	Abdulla, (*m.*), 25, *Coal-cutter.*	Coal .	Deceased passed through a fence to cut coal in a gallery, when he was killed by a mass of coal, about 8′ × 1′-6″ × 1′-6″, which fell from a "slip" in the roof at a height of 8 feet. Inspection and inquiry made.
5	4th January, 1-45 P.M.	Jamuria mine, Charanpur P. O., Bengal.	Equitable Coal Co., Ltd.	Ramjoo Meah, (*m.*), 45, *Labourer.*	Coal .	While deceased was assisting in resetting a bar in a gallery, 9 feet high, a piece of coal fell from the roof and struck his left leg. He sustained injuries which proved fatal 24 hours later. Inspection and inquiry made.

6	7th January, 8-20 A.M.	Bejdih mine, Dishergarh P.O., Bengal.	Equitable Coal Co., Ltd.	Gopal Chamar, (*m.*), 35, Tilak Roy; (*m.*), 36, *Coal-cutters.*	Coal	A sudden bump occurred in the neighbourhood of a goaf, causing an extensive fall of roof and side coal. Two miners were killed instantly and five others were seriously injured by the falling coal. Inspection and inquiry made.
7	17th January, 11-30 P.M.	Baragolai mine, Margherita P. O., Assam.	Assam Railways and Trading Co., Ltd.	Omar Pathan, (*m.*), 24, *Labourer.*	Coal	Deceased was one of five persons employed in pulling coal from an "Opening", when the roof came on "weight" and the sirder ordered all the men out. Deceased, however, tried to make for a road to the rise of the "opening" when he was struck and fatally injured by a mass of coal which fell from the roof at a height of 10 feet. Inspection and inquiry made.
8	1st February, 3 P.M.	Methani mine, Sitarampur P. O., Bengal.	Aldih Coal Co., Ltd.	Sitabi Singh, (*m.*), 35, *Coal-cutter.*	Coal	Immediately after dressing some roof coal in a seam 15 feet thick, a miner was struck by a piece of roof stone, 5′ × 2′-6″ × 2¼′. He was fatally injured. Inspection and inquiry made.
9	2nd February, 7-45 P.M.	Bejdih mine, Sunderchak P. O., Bengal.	Equitable Coal Co., Ltd.	(1.) Takon Meah, (*m.*), 35, (2) Jhari Meah, (*m.*), 25, (3) Sanu Meah, (*m.*), 28, *Coal-cutters.*	Coal	While loading coal in a level, three miners were struck by a mass of roof coal, 24′ × 4′-6″ × 2′, which fell from a height of 9 feet. Two of the miners were killed instantly while a third was fatally injured. Inspection and inquiry made.
10	3rd February, 9 A.M.	East Gopalichuk mine, Jharia P. O., Bihar.	Gopalichuck Collieries Ltd.	Lochua Barhi, (*m.*), 20, *Timberman.*	Coal	Deceased with others was moving a small pump along a level gallery when a wedge shaped mass of roof stone, 12′ × 3′ × 9′-2″, from beneath which supports had been removed, fell and killed deceased on the spot. Another person was seriously injured. Inspection and inquiry made.
11	5th February, 5 A.M.	Bakh Gandhala No. 1 mine, Dandot P. O., Punjab.	Wah Stone and Lime Quarries, Ltd., and Pandit Gian Chand.	Biru, (*m.*), 30, *Coal-cutter.*	Coal	While working at a longwall face deceased was killed by a mass of stone which fell from concealed "slips" in the roof. Inspection and inquiry made.
12	5th February, 1-30 A.M.	Simlabahal mine, Jharia P. O., Bihar.	Bhalgora Coal Co., Ltd.	Bekaroo Kora, (*m.*), 35, *Coal-carrier.*	Coal	While deceased was assisting to dress down roof coal in a gallery after blasting, a mass of stone, 2′ × 2′ × 3″, fell from between two "slips" in the roof at a height of 14 feet. He sustained serious injuries to which he succumbed three weeks later. Inspection and inquiry made.
13	8th February, 2-30 A.M.	Sripur (Nos. 1, 2 and 8 Pits) mine, Kalipahari P. O., Bengal.	Lodna Colliery Co., (1920), Ltd.	Bhagwandin Passi, (*m.*), 50, *Coal-cutter.*	Coal	After blasting, a gang of miners resumed work in a gallery before it had been thoroughly examined. A mass of shale roof, about 6′ × 3′ × 6″ thick, suddenly fell on deceased from a height of 12 feet. He succumbed to his injuries four hours later. Inspection and inquiry made.

APPENDIX II—*contd.*

Fatal Accidents during the year 1938—*contd.*

Serial number.	Date and hour of accident.	Name and situation of mine.	Name of owner.	Name, sex, age and occupation of person killed.	Name of mineral worked.	Cause of accident and remarks.
			FALLS OF ROOF AND SIDES—*contd.*			
			(*a*) Falls of roof—*contd.*			
14	11th February, 4 A.M.	Saltore mine, Neturia P. O., Bihar.	Burrakur Coal Co., Ltd.	(1) Akloo Roy, (*m.*), 32, (2) Bnagi Roy, (*m.*), 36, *Coal-cutters.*	Coal	While a number of miners and loaders were "robbing" coal in a fenced-off gallery, they released a mass of coal, 42′ × 16′ × 1′-6″, which fell from the roof at a height of 12 feet. Two of the miners were struck by the falling coal and killed instantly. Inspection and inquiry made.
15	18th February, 1 A.M.	Jambad Selected mine, Kajoragram P. O., Bengal.	Devji Ghelabhai & Bros.	Barkoo Majhi, (*m.*), 30, *Coal-cutter.*	Coal	While cutting floor-coal in a gallery, a miner was fatally injured by a piece of shale, about 1′-6″ × 1′ × 4″ thick, which fell on his head from the roof at a height of 10 feet. Inspection and inquiry made.
16	19th February, 12-30 P.M.	Kustore mine, Kusunda P. O., Bihar.	Raneegunge Coal Association, Ltd.	Prasadi Kandu, (*m.*), 30, *Labourer.*	Coal	In a depillaring area a mass of coal, 8′ × 2′-6″ × 1′-6″, fell from the roof at a height of 14′ high, and rolled on to deceased, pressing him against the pointed end of a crowbar with which he was working. The crowbar pierced his body, inflicting injuries which proved fatal shortly after. Inspection and inquiry made.
17	20th February, 8 A.M.	Doeli mine, Dishergarh P. O., Bihar.	Deoli Coal Co., Ltd.	Sambhu Mallik, (*m.*), 36, *Coal-cutter.*	Coal	While a miner was cutting roof-coal from a gallery 11 feet high, a mass of coal, about 12′ × 6′ × 3′, thick, fell from between two parallel slips in the roof and killed him instantly. Inspection and inquiry made.
18	1st March, 7 A.M.	Jamuria mine, Charanpur P. O., Bengal.	Equitable Coal Co., Ltd.	Hemon Chamar, (*m.*), 44, *Coal-cutter.*	Coal	While some miners were engaged in depillaring operations, a mass of coal, 10′ × 8′ × 1′, fell just inside the goaf and dislodged several props, two of which struck one of the miners, causing fatal injuries. Inspection and inquiry made.
19	7th March, 12 NOON.	Mosaboni mine, Ghatsila P.O., Bihar.	Indian Copper Corporation, Ltd.	Namsingh Thappa, (*m.*), 35, *Sirdar.*	Copper	While a gang of persons was engaged in cleaning the floor of a stope in order to set props, a mass of stone, 4′ × 3′ × 6″, fell from the hanging wall at a height of 5 feet and struck deceased, inflicting serious injuries to which he succumbed about three days later. Inspection and inquiry made.

20	9th March, 2 P.M.	Saltore mine, Neturia P. O., Bihar.	Burrakur Coal Co., Ltd.	(1) Panchu Meah, (*m.*), 30, (2) Tipan Pandey, (*m.*), 25, (3) Mahabir Chowdhury, (*m.*), 23, *Coal-cutters.*	Coal	While eight miners and loaders were engaged in cutting floor coal preparatory to commencing the extraction of a pillar, a "bump" occurred and caused a large mass of coal, 33 feet in length, to fall from a "slip" in the side of a pillar. Two miners were killed instantly and a third fatally injured, while a fourth was seriously injured. Inspection and inquiry made.
21	15th March, 2 A.M.	Sodepur (Nos. 9 & 10 Pits) mine, Sundarchak P. O., Bengal.	Bengal Coal Co., Ltd.	Doman Dosad, (*m.*), 38, *Labourer.*	Coal	While a gang of workers was withdrawing props in a depillaring area, a mass of roof-stone, about 50′ × 20′ × 2′-6″, fell without warning from a height of 18 feet. Deceased was killed instantly and three others were seriously injured. Inspection and inquiry made.
22	23rd March, 2-45 P.M.	Kustore mine, Kusunda P. O., Bihar.	Raneegunge Coal Association, Ltd.	Khadon Shaw, (*m.*), 30, *Coal-carrier.*	Coal	While filling coal in a depillaring area, deceased was killed by a fall of roof, about 12′ × 8′ × 2′, which suddenly became dislodged from between two concealed "slips" at a height of 10 feet. Inspection and inquiry made.
23	24th March, 7 A.M.	Dishergarh west mine, Dishergarh P. O., Bengal.	Equitable Coal Co., Ltd.	(1) Thakur Mondal, (*m.*), 28, (2) Babulal Mondal, (*m.*), 25, *Coal-cutters.*	Coal	While five miners were at work in a depillaring area a "bump" occurred and caused a mass of roof stone, 12′ × 5′ × 6″, to fall from a height of 7 feet. Two were killed instantly, one was seriously injured and a fourth sustained slight injuries. Inspection and inquiry made.
24	25th March, 2-30 P.M.	Chasnalla mine, Pathardihi P. O., Bihar.	Chasnalla Coal Company.	Sona Majhi, (*m.*), 35, *Coal-cutter.*	Coal	While filling a basket with coal in an underground gallery deceased was fatally injured by a wedge-shaped mass of coal, 2′ × 2′-3″ × 3′, which fell from a concealed smooth bedding place at a height of 7 feet. Inspection and inquiry made.
25	31st March, 8-45 P.M.	Sripur (Nos. 1, 2 and 3 Pits) mine, Kalipahari P. O., Bengal.	Lodna Colliery Co., (1920), Ltd.	Chandrika Passi, (*m.*), 38, *Coal-cutter.*	Coal	A gang of miners was at work in a depillaring section when a "bump" occurred and a mass of shale-roof, about 8′ × 6′ × 6″ thick, fell from a height of 13 feet killing one of them instantly. Inspection and inquiry made.
26	31st March, 11 A.M.	Damua mine, Bamhanwara P. O., Central Provinces.	Kanhan Valley Coal Co., Ltd.	Moji, (*m.*), 36, *Fitter.*	Coal	A pipe was being moved in an underground gallery, when it struck a prop, causing a piece of roof coal to fall on deceased who sustained serious injuries. He died a few days after being discharged from hospital three weeks after the accident.
27	2nd April, 11 P.M.	Makerwal mine. Trag P. O., Punjab.	R. S. Lala Ishar Das Kapur and Mr. C. Bevan-Petman.	Mirmast, (*m.*), 45, *Coal-cutter.*	Coal	While working at the face of a gallery, the left leg of deceased was injured by a mass of stone weighing about 2 cwts. which fell from the roof from a height of 5 feet. Gangrene set in and his leg was amputated eleven days later and he died of septicemia and exhaustion 19 days after the accident. Inspection and inquiry made.

APPENDIX II—*contd.*

Fatal Accidents during the year 1938—*contd.*

Serial number.	Date and hour of accident.	Name and situation of mine.	Name of owner.	Name, sex, age and occupation of person killed.	Name of mineral worked.	Cause of accident and remarks.
			FALLS OF ROOF AND SIDES—*contd.*			
			(*a*) Falls of roof—*contd.*			
28	3rd April, 5-45 A.M.	Barmondia mine, Sitarampur P. O., Bengal.	New Beerbhum Coal Co., Ltd,	Munshi Meah, (*m.*), 40, *Coal-cutter.*	Coal	Deceased was engaged in cutting down roof coal in a gallery 10 feet high, when he dislodged about 3 cwt. of coal. A piece of coal struck him on the head, causing fatal injuries. Inspection and inquiry made.
29	4th April, 2 P.M.	Jamuria mine, Charanpur P. O., Bengal.	Equitable Coal Company, Ltd.	Huru Meah, (*m.*), 41, *Coal-cutter.*	Coal	While a miner was leaving his working gallery he was killed by a mass of shale, about 11′ × 2′-6″ × 1′ thick, which fell on him from the roof at a height of 8 feet. Inspection and inquiry made.
30	6th April, 4 A.M.	Sripur mine, Kalipahari P. O., Bengal.	Lodna Colliery Co. (1920), Ltd.	Ramnath Chamar, (*m.*), 35, *Coal-cutter.*	Coal	While deceased was lying near the corner of a pillar, a piece of coal, weighing about 1 cwt., fell on his head from a height of 7 feet. He sustained serious injuries to which he succumbed three days later. Inspection and inquiry made.
31	12th April, 5-30 P.M.	Kalithan Gurgaon mine, Bhojudih P. O., Bihar.	K. B. Seal & Sons	Sripati Deswali, (*m.*), 40, *Coal-cutter.*	Coal	While working in a gallery deceased was struck and seriously injured by a wedge-shaped mass of coal and shale, 4′ × 2′ × 1′-3″, which fell from a slip in the roof at a height of 6 feet. He succumbed to his injuries two days later. Inspection and inquiry made.
32	22nd April, 9-15 A.M.	Ledo Valley mine, Ledo P. O., Assam.	Assam Railways and Trading Co., Ltd.	Birsha Munda, (*m.*), 25, *Coal-cutter.*	Coal	Deceased was working in an "opening" when he was struck by a mass of roof coal, 4′ × 4′ × 1′-6″, which fell on him from a height of 6 feet. He was killed instantly. Inspection and inquiry made.
33	23rd April, 12 NOON.	Sripur (Nos. 1, 2 & 3 Pits) mine, Kalipahari P. O., Bengal.	Lodna Colliery Co., (1920), Ltd.	Suleman Meah, (*m.*), 42, *Timberman.*	Coal	Prior to firing shots in the roof coal of a gallery, 7 feet high, a timberman was withdrawing the supports when a mass of coal, 20′ × 16′ × 6′ thick, fell away from the roof and pinned him to the floor. He was killed instantly. Inspection and inquiry made.

34	25th April, 1-45 P.M.	Sripur mine, Kalipahari P. O., Bengal.	Lodna Colliery Co., (1920), Ltd.	Najir Meah, (*m.*), 45, *Loader.*	Coal	While at work in a gallery which had been stopped owing to dangerous conditions, a loader was fatally injured and another seriously injured by a mass of coal, 12′ × 12′ × 3′, which fell from the roof at a height of 9 feet. Had the sirdar carried out his instructions, the accident would not have occurred. Inspection and inquiry made.
35	7th May, 3 A.M.	Palachauri mine, Junnordeo P. O., Central Provinces.	N. H. Ojha & Co., Ltd.	(1) Ramanichu, (*m.*), 30, (2) Ganga Singh, (*m.*), 32, (3) Amal Lal, (*m.*), 20, *Loaders.*	Coal	While a gang of loaders was at work in a depillaring area, a mass of roof stone, 8′ × 4′ × 2′, fell without warning from two converging "slips" in the roof. Two of the men were killed instantly and a third was fatally injured. Inspection and inquiry made.
36	17th May, 5 A.M.	Eklehra mine, Parasia P. O., Central Provinces.	Amalgamated Coal-fields, Ltd.	Sadhu Koiri, (*m.*), 35, *Coal-cutter.*	Coal	Deceased entered an underground working place in which the roof was unsafe, and was struck by a mass of roof shale, 3′-9″ × 3′-6″ × 1′-6″, which fell from a height of 8 feet. He was killed instantly. He had been told not to enter the place but no fence had been erected to prevent access. Inspection and inquiry made.
37	17th May, 5-15 P.M.	Jeenagora (East Bararee) mine, Jharia P. O., Bihar.	Jeenagora (East Bararee) Colliery Co., Ltd.	Mathura Gope, (*m.*), 40, *Labourer.*	Coal	While erecting a fence in a gallery adjoining a goaf deceased was struck by a piece of coal which fell from the roof at a height of about 27 feet. He sustained injuries which proved fatal 9 days later. Inspection and inquiry made.
38	20th May, 2 A.M.	Jharia Khas mine, Jharia P. O., Bihar.	Standard Coal Co., Ltd.	Rameswar Pasi, (*m.*), 38, *Coal-cutter.*	Coal	A miner was fatally injured when a mass of roof-stone, weighing about a ton, fell from a height of 7 feet. A slip was exposed after the fall. Inspection and inquiry made.
39	27th May, 2 A.M.	Jogta mine, Sijua P. O. Bihar.	Agabeg Brothers, Ltd.	Akul Teli, (*m.*), 35, Nanu Shao, (*m.*), 32, *Shaft Sinkers.*	Coal	From a gallery 26 feet high a staple-pit 8 feet in diameter had been sunk to a depth of 50 feet. While 6 men were drilling holes at the bottom of the shaft, stone fell from the roof of the gallery and four pieces rolled into the shaft. Three men were struck and seriously injured, two of whom subsequently died. Inspection and inquiry made.
40	27th May, 12 NOON.	North East Angarpathra mine, Katrasgarh P. O., Bihar.	A. R. Sen Gupta.	Mohna Chamar, (*m.*), 36, *Coal-cutter.*	Coal	A coal-cutter passed through a fence and was loading coal from a goaf when a mass of stone, 5′ × 3′ × 1′ 6″, fell from the roof from a height of about 7 feet and killed him on the spot. Inspection and inquiry made.
41	5th June, 5-50 A.M.	Jamuria mine, Charanpur P. O., Bengal.	Equitable Coal Co., Ltd.	Utabali Meah, (*m.*), 40, *Coal-cutter.*	Coal	A miner was standing on a ladder dressing down roof coal in a depillaring area, when a lump of coal struck and displaced the ladder, causing him to fall to the floor. Before he could recover himself he was struck and killed instantly by a mass of coal, 2′ × 1′ × 1′, which fell from a height of 13 feet. Inspection and inquiry made.

APPENDIX II—*contd.*

Fatal Accidents during the year 1938—*contd.*

Serial Number.	Date and hour of accident.	Name and situation of mine.	Name of owner.	Name, sex, age and occupation of person killed.	Name of mineral worked.	Cause of accident and remarks.
			FALLS OF ROOF AND SIDES—*contd.*			
			(*a*) Falls of roof—*contd.*			
42	8th June, 1-30 P.M.	Bhamori mine, Parasia P. O., Central Provinces.	Amalgamated Coal-fields, Ltd.	Jugal Kishore, (*m.*), 28, *Trammer.*	Coal	While clearing a fall of roof stone deceased was killed by a slab of roof-stone, 4′-6″ × 1′-6″ × 1′-6″, which fell unexpectedly from a concealed "slip" at a height of 5 feet. Inspection and inquiry made.
43	9th June, 5 P.M.	Toposi mine, Toposi P. O., Bengal.	Bansra Coal Co., Ltd.	Rameswar Koiri, (*m.*), 25, *Labourer.*	Coal	Deceased raised one end of a prop, which had been withdrawn from a gallery 6 feet high, when a mass of shale, 4′ × 2′ × 3″, suddenly fell from the roof on the other end, causing the prop to strike his body. He received serious internal injuries which proved fatal 7½ hours later. Inspection and inquiry made.
44	24th June, 6 P.M.	Barmondia mine, Sitarampur P. O., Bengal.	New Beerbhoom Coal Co., Ltd.	Jogi Kanu, (*m.*), *Roof-dresser.*	Coal	Deceased was levering down roof coal in a machinecut gallery after blasting, when a mass of coal, 2′ × 2′ × 1′-9″, fell on him from a height of 4 feet. He was killed instantly. Inspection and inquiry made.
45	29th June, 2 P.M.	Bejdih mine, Sunderchak P. O., Bengal.	Equitable Coal Co., Ltd.	(1) Budhan Barhi, (*m.*), 38, *Timberman.* (2) Thanu Gope, (*m.*), 39, *Labourer.*	Coal	The deceased were knocking out props with a long wooden pole instead of using the prop withdrawer as instructed when a mass of coal, 15′ × 7′ × 8″, fell on them from the roof at a height of 7½ feet. They were killed instantly. Inspection and inquiry made.
46	5th July, 6 P.M.	Lodna mine, Jharia P.O., Bihar.	Lodna Colliery Co., (1920), Ltd.	Joychand Kora, (*m.*), 55, *Loader.*	Coal	In a gallery 16 feet wide and 9 feet high where tubs were being loaded a mass of coal, 5′ × 4′ × 3′, fell from the roof. One loader was killed instantly by the falling coal and another was struck and seriously injured. Inspection and inquiry made.
47	7th July, 4 P.M.	Kubera mine, Gudur P. O., Madras.	S. V. Subba Reddy	Malli Balagurava-du, (*m.*), 20, *Labourer.*	Mica	While deceased was passing through a "drive" 7 feet high a mass of rock, 3′ × 2′ × 1′, fell on him from the roof and killed him instantly. Inspection and inquiry made.

48	*9th July,* 9 A.M.	*Eklehra mine,* Parasia P. O., Central Provinces.	*Amalgamated Coal-fields, Ltd.*	*Atmaram,* (*m.*), 30, *Coal-cutter.*	*Coal*	*Deceased was struck and fatally injured by a mass of roof shale, 4'-6" × 1'-6' × 9", which fell without warning from a height of 6 feet. Inspection and inquiry made.*
49	12th July, 12-30 P.M.	Palachauri mine, Junnordeo P. O., Central Provinces.	N. H. Ojha & Co., Ltd.	Maniram, (*m.*), 30, *Timberman.*	Coal	While deceased was preparing to set a prop in a gallery a mass of stone, 3' × 1'-6" × 6", fell on him from the roof at a height of 8 feet. He sustained serious injuries to which he succumbed about a day later. Inspection and inquiry made.
50	29th July, 4-30 A.M.	Madhuband mine, Nudkhurki P. O., Bihar.	Karamchand Thapar & Bros., Ltd.	Ganesh Bauri, (*m.*), 27, *Coal-cutter.*	Coal	While a miner was sitting at the side of a gallery 20 feet high, a piece of coal, weighing 2 lbs., fell on his head from a slip in the roof. He sustained injuries to which he succumbed two months later. Inspection and inquiry made.
51	12th August, 5-30 P.M.	Bhalgora mine, Jharia P. O., Bihar.	Bhalgora Coal Co., Ltd.	Gazi Pasi, (*m.*), 37, *Coal-cutter.*	Coal	After a shot had been fired in the roof coal in a gallery 8 feet high a miner stood on a barrel to dress the roof. A piece of coal which he dislodged struck and overturned the barrel and after falling to the floor another piece of coal fell on his left leg, inflicting serious injuries. He died 5½ hours later. Inspection and inquiry made.
52	21st August, 2-30 P.M.	Malkera Choitodih mine, Katrasgarh P. O., Bihar.	Tata Iron & Steel Co., Ltd.	Bhusan Rajwar, (*m.*), 34; Tulsi Chamar, (*m.*), 34; *Coal-cutters.*	Coal	While the last portion of a pillar was being extracted in a seam 6 feet thick, the roof stone in the adjoining goaf collapsed with little warning. The stock of coal collapsed and 20 props in its vicinity were dislodged. Two of the miners present in the area were unable to escape and were killed instantly. Inspection and inquiry made.
53	31st August, 3-30 P.M.	Bejdih mine, Sunderchak P. O., Bengal.	Equitable Coal Co., Ltd.	Jhari Singh, (*m.*), 31, *Coal-cutter.*	Coal	While deceased was filling coal in a depillaring area, a "bump" occurred, when a mass of coal, weighing about 7 cwt., fell from the roof at a height of 10 feet. He sustained injuries to which he succumbed two and a half hours later. Inspection and inquiry made.
54	4th September, 11 A.M.	Kargali mine, Bokaro P. O., Bihar.	State Railways' Coal Department.	Raghunath Majhi, (*m.*), 30, *Coal-cutter.*	Coal	Deceased was fatally injured while cutting roof coal in a gallery. It is presumed that he was struck by a mass of roof coal which he dislodged from a height of about 7 feet. Inspection and inquiry made.
55	4th September, 1 A.M.	Nandi mine, Charanpur P. O., Bengal.	Mondal Brothers	Sitaram Majhi, (*m.*), 35, *Coal-cutter.*	Coal	While loading coal in a depillaring area deceased was struck by a piece of stone, 10' × 2'-6" × 1'-6", which fell from the roof at a height of 14 feet, and killed him instantly. Inspection and inquiry made.

APPENDIX II—*contd.*

Fatal Accidents during the year 1938—*contd.*

Serial number	Date and hour of accident.	Name and situation of mine.	Name of owner.	Name, sex, age and occupation of person killed.	Name of mineral worked.	Cause of accident and remarks.
			FALLS OF ROOF AND SIDES—*contd.*			
			(a)* Falls of roof.—*contd.			
56	6th September, 10 P.M.	Dhemo Main mine, Sitarampur P. O., Bengal.	Dhemo Main Collieries, Ltd.	(1) Rajali Meah, (*m.*), 35. (2) Sarjoo Singh, (*m.*), 28, (3) Tribhuj Singh, (*m.*), 30, (4) Robi Mahato, (*m.*), 29, (5) Chanoo Mahato, (*m.*), 26, (6) Akloo Mahato, (*m.*), 27, (7) Sabi Shaw, (*m.*), 33, (8) Dhanraj Mahato, (*m.*), 34, (9) Hulash Mahato, (*m.*), 32, *Coal-cutters.*	Coal	While nine miners were engaged in depillaring operations in a seam 12 feet thick, a mass of stone, 57′ × 38′ × 3′ fell from the roof. All were buried by the falling mass and killed instantly. Inspection and inquiry made.
57	13th September, 11-15 A.M.	Mundalpur, mine, Charanpur P. O., Bengal.	Mundalpur Coal Co., Ltd.	(1) Prolhad Bauri, (*m.*), 40, *Coal-cutter.* (2) Panchu Kamar, (*m.*), 42, *Timberman.* (3) Pankhi Bauri, (*m*), 40, *Labourer.*	Coal	While a number of persons were engaged in depillaring operations in a seam 8′-6″ thick, a mass of sandstone, 40′ × 14′ × 3′, suddenly fell from the roof. The deceased were killed instantly while two other miners were seriously injured. Inspection and inquiry made.
58	17th September, 4-30 A.M.	Lodna (Nos. 4 & 5 Pits) mine, Jharia P. O., Bihar.	Lodna Colliery Co. (1920), Ltd.	Somai Majhi, (*m.*), 30, *Coal-cutter.*	Coal	While a miner was resting by the side of a tram-line, a mass of roof-stone, 20′ × 12′ × 9″ thick, fell from a height of 7 feet. He was struck by one of the falling pieces of stone and received injuries which proved fatal three hours later. Inspection and inquiry made.

59	28th September, 10-45 P.M.	Banksimula mine, Charanpur P. O., Bengal.	Bengal Coal Co., Ltd.	Netali Meah, (*m.*), 45, *Coal-cutter.*	Coal	While breaking coal for loading in a gallery deceased was struck by a piece of shale, 9″ × 5″ × 1¼″, which fell from the roof at a height of 16 feet. He was fatally injured. Inspection and inquiry made.
60	30th September, 3-30 P.M.	Namdang mine, Margherita P. O., Assam.	Assam Railways and Trading Co., Ltd.	(1) Chaunay Kami, (*m.*), 43, *Head Timberman.* (2) Tulsiram Soner, (*m.*), 43, *Asst. Timberman.*	Coal	While supports were being set on a loading level near the entrance to an "opening", a mass of roof coal, 26′ × 10′ × 5′, fell from a 'slip' in the roof at a height of 5 ft. The deceased were killed on the spot and two other persons were seriously injured. Inspection and inquiry made.
61	3rd October, 2 P.M.	Datla mine, Junnordeo P. O., Central Provinces.	Amalgamated Coalfields, Ltd.	Chindhya, (*m.*), 27, *Loader.*	Coal	While deceased was filling his basket with coal in a gallery he was killed by a mass of roof-stone, 4′ × 3′ × 1′, which fell through some old roof supports at a height of 10 feet. If the old time bring had been properly secured the accident would have been avoided. Inspection and inquiry made.
62	12th October, 4-30 P.M	Bararee mine, Jealgora P. O., Bihar.	East Indian Coal Co., Ltd.	Etwari Bhuiya, (*m.*), 22, *Loader.*	Coal	Deceased was assisting to load coal which had been blasted from the roof of a gallery 16 feet high, when he was struck by a mass of coal, weighing about half a cwt., which fell from the roof He sustained serious injuries to which he succumbed about ten hours later. Inspection and inquiry made.
63	14th October, 9-30 A.M.	Dharmaband mine, Katrasgarh P. O., Bihar.	New Tetturya Coal Co., Ltd.	(1) Sadhu Rewani, (*m.*), 26, (2) Gangu Rewani, (*m.*), 32, *Stone-cutters.*	Coal	In a gallery 12′ feet wide and 5′-6″ high roof coal 2 feet thick and a band of shale 1′-3″ thick had become unsafe and a gang of roof dressers was engaged to take down the coal and shale. Two of them went under the dangerous roof, probably to remove a prop, and they were killed instantly when an area of the roof 15 feet long and 10 feet wide, suddenly collapsed. Inspection and inquiry made.
64	14th October, 7 P.M.	Akhalpur mine, Charanpur P. O., Bengal.	Hurriladih Coal Co., Ltd.	Nathoo Bouri, (*m.*), 30, *Coal-cutter.*	Coal	While deceased was passing under roof coal from which props had been withdrawn, a mass of coal, 9′ × 5′ × 1′-6″, fell on him from a height of 8 feet, inflicting fatal injuries. Inspection and inquiry made.
65	22nd October, 6 A.M.	Banksimula mine, Charanpur P. O., Bengal.	Bengal Coal Co., Ltd.	Gayadin Pasi, (*m.*), 39, *Coal-cutter.*	Coal	Deceased was assisting to dress coal from the roof of a gallery after blasting, when a mass of roof coal, 12′ × 2′ × 2′, unexpectedly fell on him from a height of 17 feet. He succumbed to his injuries about 1½′ days later. Inspection and inquiry made.
66	26th October, 3 A.M.	Central Kirkend mine, Kusunda P. O., Bihar.	Central Kirkend Coal Co., Ltd.	Baran Dhobi, (*m.*), 45, *Coal-cutter.*	Coal	In a depillaring area in a seam 12 feet in thickness in which the bottom 9 feet only of the seam was being extracted, a mass of roof coal, 9′ × 5′ × 4′, collapsed, dislodging three props. A miner was struck and killed instantly by the falling coal. Inspection and inquiry made.

APPENDIX II—*contd.*

Fatal Accidents during the year 1938—*contd.*

Serial number	Date and hour of accident.	Name and situation of mine.	Name of owner.	Name, sex, age and occupation of persons killed.	Name of mineral worked.	Cause of accident and remarks.
			FALLS OF ROOF AND SIDES—*contd.*			
			(*a*) **Falls of roof—*concld.***			
67	31st October, 10 A.M.	Banksimula mine, Charanpur P. O., Bengal.	Bengal Coal Co., Ltd.	Dukhan Singh, (*m*), 34, *Timberman.*	Coal	While deceased was tightening a prop in a gallery 17 feet high by wedging at the bottom, a mass of stone, measuring 6′ × 1′ × 6″, fell from the roof and killed him instantly. Inspection and inquiry made.
68	3rd November, 5 A.M.	Bhalgora mine, Jharia P. O., Bihar.	Bhalgora Coal Co., Ltd.	Bachha Singh, (*m*.). 36, *Coal-cutter.*	Coal	While dressing down roof coal in a gallery with a crow-bar after blasting, a miner dislodged a mass of coal, 5′ × 4′ × 1′ thick, which struck a drum on which he was standing, causing it to overturn. He lost his balance and fell on the fallen coal, sustaining internal injuries which proved fatal. Inspection and inquiry made.
69	14th November, 5 A.M.	Gandhala (No. 4½) mine, Dandot P. O., Punjab.	Wah Stone and Lime Quarries, Ltd, and Pandit Gian Chand.	Rosha, (*m*.), 40. *Coal-cutter.*	Coal	While working at a longwall face a miner was fatally injured by a mass of stone which fell from concealed "slips" in the roof at a height of 2 feet. Inspection and inquiry made.
70	16th November, 4-30 A.M.	Palachauri mine, Junnordeo P. O., Central Provinces.	N. H. Ojha & Co., Ltd.	Girdhari. (*m*.). 30, *Coal-cutter.*	Coal	Deceased was dressing down roof coal after blasting in a depillaring area, when about 1 ton of coal fell on him from a height of 8 feet. He sustained serious injuries to which he succumbed a few hours later.
71	17th November, 3-30 P.M.	Seetalpore mine, Dishergarh P. O., Bengal.	Bengal Coal Co., Ltd.	Mahadeb Turi, (*m*.), 46, *Loader.*	Coal	While deceased was carrying coal on a loading level in a depillaring area, a "bump" occurred, causing a mass of roof coal, 8′ × 6′ × 2′, to fall and upset an empty tub which struck deceased, injuring him fatally. Inspection and inquiry made.
72	18th November, 2-30 P.M.	Kustore mine, Kusunda P. O., Bihar.	Raniganj Coal Association, Ltd.	Paresh Teli, (*m*.), 30, *Coal-cutter.*	Coal	While dressing down roof coal after blasting in a gallery 12 feet high, a miner dislodged a mass of coal, 6′ × 3′ × 3′ thick, which struck deceased, killing him instantly. Inspection and inquiry made.

73	29th November, 9 P.M.	Banksimula mine, Charanpur P. O., Bengal.	Bengal Coal Co., Ltd.	(1) Ram Narayan Kurmi, (*m*), 30, (2) Ram Sukh Pasi, (*m.*), 31, *Coal-cutters.*	Coal	After two shots had been fired in some roof coal in a gallery and while a miner was making an examination from a ladder, a mass of coal, 16′ × 8′ × 1′-6″, fell from the roof. The deceased, who endeavoured to make good their escape, ran in the wrong direction, and were struck by the falling mass and killed instantly. Inspection and inquiry made.
74	8th December, About 10-30 A.M.	Bhamori mine, Parasia P. O., Central Provinces.	Amalgamated Coal-fields, Ltd.	(1) Haribar Bramhin, (*m.*), 17, *Labourer.* (2) Nandram, (*m*), 25, *Sirdar.*	Coal	The roof of a stone drift was being dressed after blasting, when a mass of roof suddenly fell on the deceased killing them on the spot.
75	8th December, 12-30 P.M.	Sodepore (Nos. 9 & 10 Pits) mine, Sunderchak P. O., Bengal.	Bengal Coal Co., Ltd.	Ramsaran Kurmi, (*m*), 38, *Assistant timber-man.*	Coal	While a timberman and his two assistants were preparing to build a platform for dressing down roof coal, preparatory to depillaring operations, a mass of coal, 1′ × 9″ × 6″, fell on deceased from a height of 13 feet. He sustained serious injuries to which he succumbed 4 days later. Inspection and inquiry made.
76	24th December, 4 A.M.	South Bulliary Kendwadih mine, Kusunda P. O., Bihar.	East Indian Coal Co., Ltd.	Charan Majhi, (*m.*), 32, *Coal-cutter.*	Coal	While working in a depillaring area deceased was killed by a mass of coal 18′ × 5′ × 3′, which fell from a "slip" at a height of 7 feet. Inspection and inquiry made.
77	30th December, 9 P.M.	Bhalgora mine, Jharia P. O., Bihar.	Bhalgora Coal Co., Ltd.	Sakhi Barhi, (*m.*), 39, *Loader.*	Coal	In a gallery 20 feet high in which C. P. miners were taking down roof coal, about 1 cwt. of coal fell from the roof. A loader who was holding a ladder for a miner engaged in drilling a shot hole ran under the falling coal and was killed instantly. If the roof had been thoroughly tested by the sirdar after a shot was fired three hours earlier the accident would have been avoided. Inspection and inquiry made.
			(*b*) Falls of sides—(*62 deaths*).			
78	8th January, 5-40 A.M.	Bararee mine, Jealgora P. O., Bihar.	East Indian Coal Co., Ltd.	Bishahoo Pashi, (*m.*), 35, *Coal-cutter.*	Coal	While working in a depillaring area a miner was seriously injured by a mass of coal, weighing about 10 cwts., which fell from the side from a height of 12 feet. He succumbed to his injuries three days after the accident. Inspection and inquiry made.
79	10th January, 5-30 P.M.	Korapathali (Sq. No. 20e) mine. Kodarma P. O., Bihar.	R. K. Sahana & Sons.	Mangra Chamar, (*m.*), 30, *Miner.*	Mica	While three persons were working on the floor of an excavation, 20 feet deep, a fall of side occurred, measuring about 5′ × 5′ × 1′-6″, from a height of 5 feet. One of the gang was killed instantly, and another was seriously injured. Inspection and inquiry made.

APPENDIX II—*contd.*

Fatal Accidents during the year 1938—*contd.*

Serial number.	Date and hour of accident.	Name and situation of mine.	Name of owner.	Name, sex, age and occupation of person killed.	Name of mineral worked.	Cause of accident and remarks.
			FALLS OF ROOF AND SIDES—*contd.*			
			(*b*) Falls of sides—*contd.*			
80	27th January, 4-30 A.M.	Dishergarh West mine, Dishergarh P.O., Bengal.	Equitable Coal Co., Ltd.	Bagal Roy, (*m.*), 38, *Coal-cutter.*	Coal	While sitting at the side of a level deceased was struck by a mass of coal, 8′ × 3′ × 3′, which fell from the side at a height of 7 feet. He was killed instantly. Inspection and inquiry made.
81	5th February, 12-30 P.M.	Lodna (Nos. 4 & 5 Pits) mine, Jharia P. O., Bihar.	Lodna Colliery Co., (1920), Ltd,	Jagannath Shaw, (*m.*), 40, *Loader.*	Coal	While loading coal in a gallery a coal-carrier was injured seriously by a mass of coal weighing about one cwt. which fell from the side of a pillar. He died about 5 months after the accident. Inspection and inquiry made.
82	7th February, 4-30 P.M.	Botejheri mine, Ramrama P. O. Central Provinces.	Dewan Chand Jiwar	Mangaria Gond, (*m.*), 25, *Miner.*	Manganese.	While at working an open excavation 6 feet deep, deceased was partially buried by a mass of earth which fell from the side of the excavation. He sustained injuries which proved fatal four hours later. Had the sides been properly sloped or stepped back the accident would have been avoided. Inspection and inquiry made.
83	12th February, 10 A.M.	Bhamori mine, Parasia P. O., Central Provinces.	Amalgamated Coal-fields, Ltd.	Nazar Khan, (*m.*), 55, *Timberman.*	Coal	While deceased was dressing the corner of a pillar which had become insecure, a mass of coal, 2′ × 1′-6″ × 1′, suddenly broke away from the corner and struck him on his left foot. He sustained injuries to which he succumbed 36 hours later. Inspection and inquiry made.
84	27th February, 4-45 P.M.	Hindubagh mine, Hindubagh P. O., Baluchistan.	Baluchistan Chrome Co., Ltd.	Sadojan, (*m.*), 27, *Miner.*	Chromite	Several persons were employed in an opencast working when a mass of stone fell from a concealed slip in the side at a height of 9 feet and killed deceased on the spot and another was seriously injured. Inspection and inquiry made.
85	28th February, 5-30 P. M.	Dhemo Main Mine, Sitarampur P. O., Bengal.	Dhemo Main Coal Co., Ltd.	Kailu Mahato, (*m.*), 45, *Loader.*	Coal	While deceased was resting on a level gallery in a depillaring area a "bump" occurred and caused a mass of coal weighing about ½ cwt. to fall from the side. He was struck by the falling coal and fatally injured. Inspection and inquiry made.

86	1st March, 1 P.M.	Katras-Choitodih mine, Katrasgarh P. O., Bihar.	Burrakur Coal Co., Ltd.	Punit Turi, (m.), 25, Coal-cutter.	Coal	A shot was fired in the side of a pillar and while deceased was loading coal before the side was dressed, a mass of coal, 3′ × 3′ × 2′, fell on him from a height of 7 feet. He sustained serious injuries to which he succumbed about three weeks later. Inspection and inquiry made.
87	8th March, 2-30 A.M.	South Pulliari-Kendwadih mine, Kusunda P. O., Bihar.	East Indian Coal Co., Ltd.	Mohesh Singh, (m.), 37, Coal-cutter.	Coal	Deceased, who was sitting 8 feet from the side of a pillar in a depillaring area, was struck and fatally injured by a mass of coal weighing about 10 cwts. which fell from a "slip" in the side at a height of 6 feet. Inspection and inquiry made.
88	12th March, 2 P.M.	Kusunda-Nayadee mine, Kusunda P. O., Bihar.	Kusunda and Nayadee Collieries Co.	Baiju Sona, (m.), 35, Labourer.	Coal	While deceased was at work in a depillaring area in a seam 28 feet thick, he was struck by a mass of coal, 8′ × 4′ × 2′-6″, which fell from a pronounced cleat in the corner of a pillar and fatally injured. Inspection and inquiry made.
89	15th March, 10 P.M.	No. 1 Gandhala mine, Choa-Saidan-Shah P. O., Punjab.	Messrs. Sant Ram, Amarnath and Lekh Raj.	Baga, (m.), 20, Coal-cutter.	Coal	While working in a gateway deceased was killed by a mass of stone, 4′-6″ × 3′ × 1′-6″, which fell from the side from a height of 4 feet. Inspection and inquiry made.
90	28th March, 12-30 P.M.	Domarkhar mine, Darigaon P. O., Bihar.	Stone Suppliers, Ltd.	Ganga Kole, (m.), 60, Miner.	Limestone	Deceased was undercutting the side of a quarry 8 feet deep, when a mass of over-burden fell and killed him instantly. Inspection and inquiry made.
91	30th March, 11 A.M.	Bara-Golai mine, Margherita P. O., Assam.	Assam Railways and Trading Co., Ltd.	Gobinda Bauri, (m.), 24, Loader.	Coal	While filling coal in a depillaring area two loaders were struck by a mass of coal, weighing about 2 tons, which fell from the side at a height of 8 feet. Deceased succumbed to his injuries shortly after the accident and his companion was seriously injured. Inspection and inquiry made.
92	2nd April, 8 P.M.	Bhalua mine, Chakai P. O., Bihar.	Kedar Nath Marwari.	Ram Manjhi, (m.), 35, Miner.	Mica	While two miners were at work in an excavation 25 feet deep, a mass of schist, 6′ × 6′ × 2′-3″, fell from the hanging wall from a height of 8 feet. Both were seriously injured and one of them subsequently died. Inspection and inquiry made.
93	2nd April, 9 A.M.	Lodna mine, Jharia P. O., Bihar.	New Standard Coal Co., Ltd.	Mihar Meah, (m.), 30, Sinker.	Coal	While at work in a sinking shaft deceased was struck and fatally injured by a piece of coal weighing 6 lbs. which fell off a cleat in the side from a height of 35 feet. Inspection and inquiry made.
94	4th April, 1-45 P.M.	Chandametta mine, Parasia P. O., Central Provinces.	Pench Valley Coal Co., Ltd.	Dhamtali Dhimar, (m.), 45, Coal-cutter.	Coal	Deceased and another miner were undercutting the side of a pillar, when a mass of coal, 5′-6″ × 3′-9″ × 1′, suddenly fell from a well-defined "cleat" in the side, killing deceased instantly. Inspection and inquiry made.

APPENDIX II—*contd.*

Fatal Accidents during the year 1938—*contd.*

Serial number.	Date and hour of accident.	Name and situation of mine.	Name of owner.	Name, sex, age and occupation of person killed.	Name of mineral worked.	Cause of accident and remarks.
			FALLS OF ROOF AND SIDES—*contd.*			
			(*b*) **Falls of sides**—*contd.*			
95	10th April, 7-30 A.M.	Bejdih mine, Sundarchak P. O., Bengal.	Equitable Coal Co., Ltd.	Rajua Kora, (*m.*), 28, *Coal-cutter.*	Coal	Deceased passed through a fence and was loading fallen coal at the side of a pillar when a mass of coal fell on him from the side He sustained injuries which proved fatal two days later. Inspection and inquiry made.
96	5th May, 10-30 A.M.	Loyabad mine, Bansjora P. O., Bihar.	Burrakur Coal Co., Ltd.	Harku Bauri, (*m.*), 42, *Coal-cutter.*	Coal	A miner was cutting coal under a stone band at the corner of a pillar, when a portion of the band, 4′ × 3′ × 2′ thick, fell from a height of 4 feet, fracturing his spine. He succumbed to his injuries 24 days later. Inspection and inquiry made.
97	24th May, 11-30 A.M.	Namdang mine, Margherita P. O., Assam.	Assam Railways and Trading Co., Ltd.	Khausherin Pathan, (*m.*), 37, *Coal-dresser.*	Coal	While shovelling coal from a gallery. 5′ × 5′, a piece of coal, measuring 1′-6″ × 1′-6″ × 1′-6″, fell from the side and struck deceased on the head, inflicting serious injuries which proved fatal an hour later. Inspection and inquiry made.
98	17th June, 5-30 P.M.	Upper Kajora mine, Kajoragram P. O., Bengal.	C. Bhowsinga	Dhausai Bilaspuri, (*m.*), 28, *Coal-cutter.*	Coal	Contrary to orders two miners were engaged in loading coal after partly dressing down some overhanging side in a gallery, 13 feet high, when a mass of coal, 4′ × 2′ × 1′, suddenly fell and struck one of them inflicting serious injuries which proved fatal 27 hours later. Inspection and inquiry made.
99	1st July, 2-30 A.M.	Sendra mine, Bansjora P .O., Bihar.	Sendra Coal Co., Ltd.	Mahadev Roy, (*m.*), 45, *Loader.*	Coal	A mass of coal, weighing about 6 cwts., fell from the side of a pillar and dislodged a prop 20 feet long. The prop struck a loader on his head and killed him instantly. Inspection and inquiry made.
100	4th July, 11 P.M.	Kustore mine, Kusunda P. O., Bihar.	Raneegunge Coal Association, Ltd.	Amin Meah, (*m*), 35, *Coal-cutter.*	Coal	While a miner was removing fallen coal from a fenced-off gallery, a mass of side coal, weighing about 3 tons, fell from a height of 15 feet. Some of the falling pieces struck him, inflicting injuries which proved fatal four hours later. Inspection and inquiry made.

101	11th July, 5 P.M.	Damua mine, Bambanwara P. O., Central Provinces.	Kanhan Valley Coal Co., Ltd.	Tulsi Kole, (*m.*), 30, *Coal-cutter.*	Coal	Deceased was killed by a mass of coal, 4′×3′×2′, which fell from the side of a pillar under extraction. Inspection and inquiry made.
102	23rd July, 1-30 P.M.	Lodna (Nos. 4 & 5 Pits) mine, Jharia P. O., Bihar.	Lodna Colliery Co. (1920), Ltd.	Mallo Jaswara, (*m.*), 42, *Coal-cutter.*	Coal	Deceased went into fenced-off disused workings and was killed by a mass of coal which fell from the side from a height of 14 feet. Inspection and inquiry made.
103	2nd August, 4-45 P.M.	Bhurkhunda mine, Bhurkunda P. O., Bihar.	State Railways' Coal Department.	Dhanuki, (*m.*), 30, *Coal-cutter.*	Coal	While dressing coal from the side of a pillar after blasting, deceased was struck and fatally injured by a mass of coal which fell from a height of 7 feet. Inspection and inquiry made.
104	4th August, 1 A.M.	Serampur mine, Giridih P. O., Bihar.	State Railways' Coal Department.	Bhado Majhi, (*m.*), 40, *Coal-cutter.*	Coal	A "bump" in a neighbouring goaf caused a piece of coal, 2′×1′×6″ thick, to burst off the side of a pillar from a height of 7 feet. Deceased was struck by the falling coal and fatally injured. Inspection and inquiry made.
105	7th August, 12-10 A.M.	Baragolai mine, Margherita P. O., Assam.	Assam Railways and Trading Co., Ltd.	Ibrahim Pathan, (*m.*), 25, *Loader.*	Coal	While at work in an "opening" a loader was struck by a mass of coal weighing about 4 tons, which fell from a concealed "slip" at a height of 9 feet. He was killed instantly. Inspection and inquiry made.
106	13th August, 7-30 P.M.	Jamadoba mine, Jealgora P. O., Bihar.	Tata Iron & Steel Co., Ltd.	Jhari Bhuiya, (*m.*), 30, *Loader.*	Coal	While loading coal, deceased was struck and killed instantly by a mass of coal measuring about 10′×5′×2=′6″, which fell from two converging cleats in the side of a pillar at a height of 12 feet. Inspection and inquiry made.
107	14th August, 1 A.M.	Charanpur mine, Charanpur P. O., Bengal.	Apcar Collieries, Ltd.	Japhar Kole, (*m.*), 30, *Loader.*	Coal	While carrying a basket of coal a miner was slightly injured by a piece of coal 8 to 10 lbs. in weight which fell from the side of a pillar, and rolled on to his foot, causing him to fall. He expired about three days later, the cause of death being obscure. Inspection and inquiry made.
108	23rd August, 2 A.M.	Methani mine, Sitarampur P. O., Bengal.	Aldih Coal Co., Ltd.	Lukmon Meah, (*m.*), 47, *Coal-cutter.*	Coal	Deceased was resting in a gallery, 7½′ high, when a mass of coal, 6′×5′×2′, fell from the side and killed him instantly. Inspection and inquiry made.
109	24th August, 10 P.M.	Sodepore (Nos. 9 and 10 Pits) mine, Sunderchak P. O., Bengal.	Bengal Coal Co., Ltd.	Chigoo Meah, (*m.*), 31, *Coal-cutter.*	Coal	While two miners were taking down roof coal in a gallery 9½ feet high, a mass of coal fell from the roof and both sides of the gallery, causing the platform on which they were working, to collapse. Both miners escaped, but a miner, who was loading a basket of coal on the floor of the gallery, was struck by a falling prop which had formed part of the platform, and was fatally injured. Inspection and inquiry made.

Fatal Accidents during the year 1938—*contd.*

Serial number.	Date and hour of accident.	Name and situation of mine.	Name of owner.	Name, sex, age and occupation of persons killed.	Name of mineral worked.	Cause of accident and remarks.
			FALLS OF ROOF AND SIDES—*contd.*			
			(*b*) **Falls of sides**—*contd.*			
110	26th August, 2 A.M.	Dishergarh West mine, Dishergarh P. O., Bengal.	Equitable Coal Co., Ltd.	Mahinda Bauri, (*m.*), 48, *Coal-cutter.*	Coal	Deceased left his working place and was robbing coal from the overhanging side of a pillar which had been fenced when a mass of coal, 3′ × 2′ × 2′, fell on him from a height of 10 feet. He sustained serious injuries to which he succumbed three days later. Inspection and inquiry made.
111	2nd September, 5 A.M.	Sripore (1, 2 & 3 Pits) mine, Kalipahari P. O., Bengal.	Lodna Colliery Co. (1920), Ltd.	Dilchand Hazam, (*m.*), 35, *Loader.*	Coal	While deceased was filling coal in a depillaring area a "bump" occurred and a mass of coal fell on him from a height of 14 feet. He was killed instantly. Inspection and inquiry made.
112	7th September, 5-30 A.M.	Damodarpur mine, Nandi P. O., Bengal.	Bengal Coal Co., Ltd.	Sujon Kole, (*m.*), 34, *Coal-cutter.*	Coal	A miner was sitting at the side of a "stook" in course of extraction, when he was struck by a mass of coal which fell from the side and was fatally injured. Inspection and inquiry made.
113	15th September, 6 A.M.	Pretoria mine, Charanpur P. O., Bengal.	Seebpore Coal Co., Ltd.	Budhu Keot, (*m.*), 45, *Coal-cutter.*	Coal	Contrary to instructions a miner was undercutting the side of a gallery when he released a mass of coal, 7′ × 3′-3″ × 1′-6″, from a cleat in the side. He was struck by the falling mass and killed instantly. Inspection and inquiry made.
114	21st September, 3 A.M.	Bansdeopur mine, Kusunda P. O., Bihar.	New Bansdeopur Coal Co., Ltd.	Bhatu Rai, (*m.*), 33, *Coal-cutter.*	Coal	While a miner was robbing coal from the corner of a pillar, a piece of coal, 3′ × 2′ × 1′ thick, fell on him from a "slip" at a height of 6 feet. He sustained serious injuries to which he succumbed shortly afterwards. Inspection and inquiry made.
115	30th September, 9-30 P.M.	Lodna (Nos. 4 & 5 Pits) mine, Jharia P. O., Bihar.	Lodna Colliery Co., (1920), Ltd.	Feranta Ruhidas, (*m*), 125, *Loader.*	Coal	A loader was engaged with others in loading coal which had been "robbed" from the side of a loading level, when a mass of coal, weighing about one ton, fell from the side from a height of 8 feet. He was struck and killed instantly. Inspection and inquiry made.

116	3rd October, 5 P.M.	Barkui mine, Paraeia P. O., Central Provinces.	Pench Valley Coal Co., Ltd.	Birja Gond, (*m.*), 55, *Loader.*	Coal	While deceased was loading coal in a depillaring area, a mass of coal, 5′ × 2′-3″ × 1′-6″, fell on him from the side from a height of 4 feet. He sustained serious injuries to which he succumbed three days later. Inspection and inquiry made.
117	11th October, 1 A.M.	Dishergarh West mine, Dishergarh P. O., Bengal.	Equitable Coal Co., Ltd.	(1) Lokhu Meah, (*m.*) 38; (2) Bonshi Roy, (*m.*), 30; *Coal-cutters.*	Coal	Contrary to instructions a number of persons entered a gallery which had not been dressed after blasting to load coal, when a mass of coal, 10′ × 3′ × 1′-6″, suddenly fell from the side, killing the deceased instantly. Inspection and inquiry made.
118	15th October, 12-30 A.M.	Lodna mine, Jharia P. O., Bihar.	Lodna Colliery Co. (1920), Ltd.	Koso Bhuiya, (*m.*), 23, *Loader.*	Coal	While coal was being loaded in a depillaring area in a seam 24 feet thick two hours after shots had been fired, a mass of coal, 15′ × 6′ × 12″, fell from the corner of an adjoining pillar. A loader was struck and killed instantly by the falling coal Inspection and inquiry made.
119	25th October, 5 P.M.	Jamadoba mine, Jealgora P. O., Bihar.	Tata Iron & Steel Co., Ltd.	Nakchhar Bilaspuri, (*m.*), 32, *Loader.*	Coal	In a depillaring area in a seam 12 feet thick while a miner was "robbing" coal from a rib at the side of a goaf a mass of coal, weighing about one ton, fell from the rib and dislodged a prop. The top end of the falling prop struck a loader and killed him instantly. Inspection and inquiry made.
120	1st November, 1 P.M.	Jamadoba mine, Jealgora P. O., Bihar.	Tata Iron & Steel Co., Ltd.	Matroo Bilaspuri, (*m.*), 40, *Coal-cutter.*	Coal	In a depillaring area in a seam 12 feet thick a mass of coal, 12′ × 7′ × 1′-3″, fell from a prononnced cleavage plane parallel to the face on to a miner. He sustained fatal injuries. Inspection and inquiry made.
121	9th November, 5 P.M.	Kajora mine, Kajoragram P. O., Bengal.	Roy Dutta & Co.	Ramdhari Ahir, (*m.*), 35, *Coal-cutter.*	Coal	Deceased was standing on a lump of coal, levering down loose coal after blasting; when he lost his balance and fell down. The coal, which he was attempting to bring down, also fell with him, inflicting serious spinal injuries which proved fatal 8 days later. Inspection and inquiry made.
122	11th November, 4 P.M.	Dabor mine, Samdi P. O., Bengal.	B. B. Chakraborty and N. K. Tewari.	Malati Mejhan, (*f.*), 40, *Loader.*	Coal	While deceased was at work in a quarry she was partially buried by a mass of earth which fell from the side. She sustained injuries which proved fatal five days later. If the overburden had been properly sloped or stepped this accident would not have occurred. Inspection and inquiry made.
123	16th November, 5-30 P.M.	Kurhurbaree mine, Giridih P. O., Bihar.	State Railways Coal Department.	Sukar Turi; (*m.*), 25, *Coal-cutter.*	Coal	While cutting coal from the side of a pillar deceased dislodged a mass of coal, 6′ × 2′ × 1′-3″, which fell on him from a height of 6 feet. He was killed instantly. Inspection and inquiry made.

APPENDIX II—*contd.*

Fatal Accidents during the year 1938—*contd.*

Serial number.	Date and hour of accident.	Name and situation of mine.	Name of owner.	Name, sex, age and occupation of person killed.	Name of mineral worked.	Cause of accident and remarks.
			FALLS OF ROOF AND SIDES—*concld.*			
			(*b*) Falls of sides—*concld.*			
124	16th November, 7-30 A.M.	Pipuljuri mine, Pakur P. O., Bihar.	G. C. Pande .	Karim Sheikh, (*m.*), 36, *Labourer.*	Stone .	Deceased was at work in an open excavation when a mass of earth fell on him, inflicting fatal injuries.
125	18th November, 4-15 A.M.	Jharia Khas mine, Jharia P. O., Bihar.	Standard Coal Co., Ltd.	Jan Mohammad, (*m.*), 45, *Coal-cutter.*	Coal .	While walking along a loading level, a miner was killed by a mass of coal, 4′ × 3′ × 1′-6″ thick, which fell from a cleat in a pillar at a height of 8 feet. Inspection and inquiry made.
126	30th November, 10 A.M.	Krishna (No. 3) mine, Khewra P. O., Punjab.	Bhai Hazura Mall and Bakshi Guru Datta.	(1) Muhammad Khan, (*m.*), 29; (2) Sher Mohammad, (*m.*), 50; *Coal-cutters.*	Coal .	While working at a long wall face, the deceased were buried by a fall of side, 4′ × 2′-6″ × 1′-6″, in a seem 2′-3″ in thickness. They were suffocated before being recovered. Inspection and inquiry made.
127	4th December, 4-30 P.M.	Mahsudpur mine. Mahpalpur P. O., Delhi.	Duli Chand . .	(1) Sheo Chand, (*m.*), 19; (2) Chutan, (*m.*), 19; *Miners.*	China clay.	While waiting at the bottom of a small shaft 50 feet deep, the deceased were fatally injured by a mass of kaoline, 5′ × 4′ × 3′, which fell from the side at a height of 20 feet. Inspection and inquiry made.
128	9th December, 2 P.M.	Bararee mine, Jealgora P.O., Bihar.	East Indian Coal Co., Ltd.	Bhairu Keot, (*m.*), 22, *Loader.*	Coal .	While a loader was at work in a gallery 25′ high adjacent to a depillaring area, a piece of coal weighing about 5 cwts., fell from the side near the roof. He was struck and killed instantly. Inspection and inquiry made.
129	10th December, 9-15 A.M.	Bansdeopur mine, Kusunda P. O., Bihar.	New Bansdeopur Coal Co., Ltd.	Bhuska Ruhidas, (*m.*), 50, *Coal-cutter.*	Coal .	While a miner was at work in a quarry a mass of stone, weighing about ½ ton, fell from a slip in the side from a height of 9 feet. He was struck by the falling stone and received fatal injuries. Inspection and inquiry made.
130	11th December, 0 45 A.M.	Seetalpore mine, Dishergarh P. O., Bengal.	Bengal Coal Co., Ltd.	Rabi Bauri, (*m.*), 35, *Coal-cutter.*	Coal .	Deceased was cutting coal from the thin end of a "stook", when a mass of coal, 4′ × 2′ × 1′-6″, fell from the side. He sustained fatal injuries and died shortly afterwards. Inspection and inquiry made.

131	14th December, 4 P.M.	*East Gopalichuck mine*, Jharia P. O., Bihar.	*Gopalichuck Collieries, Ltd.*	*Puna Bhuiya, (m), 41, Coal-cutter.*	*Coal*	*Deceased undercut the side of a pillar and a mass of coal, weighing about 10 cwts., fell from a height of 8 feet. He sustained serious injuries to which he succumbed 26 days later. Inspection and inquiry made.*
132	22nd December, 4 P.M.	Matauni mine, Jainagar P. O., Bihar.	Chatturam Horilram, Ltd.	(1) Bain Singh, (m.), 35 *Car driver.* (2) Dil Bahadur, (m.), 20, *Car cleaner.* (3) Bhatu Gope, (m.), 20; (4) Nuni Gope, (m.), 29; *Labourers.*	Mica	A mass of earth weighing about 3½ tons fell from the side of an excavation for mica 16 feet deep. A car driver and a car cleaner who were standing on the edge of the excavation and two labourers who were at work in the excavation were involved. They were buried under the fallen material and were suffocated before they could be released. Inspection and inquiry made.
133	10th December, about 9 A.M.	Tinpahar mine, Tinpahar P. O., Bihar.	Chatterjee, Shaw & Co.	Ishra Chamar, (m), 22, *Labourer.*	Stone	Deceased was working in an open excavation when a mass of side fell on him, inflicting fatal injuries.

IN SHAFTS (OVERWINDING)—(*1 death*).

134	2nd May, 8 A.M.	Khas Searsole mine, Searsole Rajbari P. O., Bengal.	Searsole Raj Wards Estate.	Ram Kisen Dosadh, (m.), 45, *Winding Engine Khalasi.*	Coal	While raising a bucket from a trolley over a shaft from which water was being raised, deceased, instead of raising the usual 3—4 feet, over-wound the engine to such an extent that the bucket was pulled over the sheave in the head gear. The bucket fell in front of the temporary engine house, and the rope pulled off the roof, which fell on deceased resulting in fatal injuries. Inspection and inquiry made.

IN SHAFTS (ROPES AND CHAINS BREAKING)—(*1 death*).

135	23rd September, 5 A.M.	Ghogri mine, Junnordeo P. O., Central Provinces.	Sial Coal Company	Chedda, (m.), 26, *Pump-attendant.*	Coal	While deceased was being raised in a bucket in a shaft, 116 feet deep, the rope broke and the bucket fell to the bottom of the shaft. Deceased sustained injuries which proved fatal 5 hours later. Inspection and inquiry made.

IN SHAFTS (WHILST ASCENDING OR DESCENDING BY MACHINERY)—(*5 deaths*).

136	2nd June, 11-10 P.M.	Lodna (Nos. 4 and 5 Pits) mine, Jharia P. O., Bihar.	Lodna Colliery Co. (1920), Ltd.	Ram Kumar Pasi, (m.), 40, *Coal-cutter.*	Coal	While ascending a shaft 350 feet deep a miner fell from near the middle of the shaft to the bottom and was killed instantly. The cage in which he was ascending was provided with rigid gates which were closed. Inspection and inquiry made.

APPENDIX II—*contd.*

Fatal Accidents during the year 1938—*contd.*

Serial number.	Date and hour of accident.	Name and situation of mine.	Name of owner.	Name, sex, age and occupation of person killed.	Name of mineral worked.	Cause of accident and remarks.
IN SHAFTS (WHILST ASCENDING OR DESCENDING BY MACHINERY)—(*5 deaths*)—*contd.*						
137	18th June, 9-30 P.M.	Khas Kenda mine, Chora P. O., Bengal.	Khas Kenda Colliery, Ltd.	Pashu Bauri, (*m.*), 35, *Loader.*	Coal	While six persons were descending a shaft, 174 feet deep, a loader fell off the cage to the bottom of the shaft and was killed instantly. If a gate of the cage had not been left open this accident would not have happened. Inspection and inquiry made.
138	5th September, 4-15 P.M.	Bararee mine, Jealgora P. O., Bihar.	East Indian Coal Co., Ltd.	Bhagbat Kolri, (*m.*), 32, *Trolleyman.*	Coal	In the absence of an onsetter at the bottom of a shaft, 466 feet deep, an underground trammer gave the signal to ascend but after entering the cage he did not lower the rigid gates. He fell out of the cage while ascending and was killed instantly. He was not authorised to give signals. Inspection and inquiry made.
139	6th September, 4-30 P.M.	Poniati Baraboni mine, Charanpur P. O., Bengal.	H. K. Nag . .	Suku Majhi, (*m.*), 36, *Coal-cutter.*	Coal	While descending a shaft, 200 feet deep deceased fell off the cage to the bottom of the shaft and was killed instantly. Inspection and inquiry made.
140	17th October, 2-15 P.M.	Pure Dishergarh mine, Sitarampur P. O., Bengal.	Pure Dishergarh Colliery Company.	Rupai Kora, (*m.*). 20, *Coal-cutter.*	Coal	While four miners were being lowered in a shaft 185 feet deep, the cage was suddenly stopped. Deceased who was at the end of the cage lost his balance and fell to the bottom of the shaft, a distance of 20 feet. He received injuries which proved fatal 8 hours later. If the gates provided at the ends of the cage had been closed the accident would not have occurred. Inspection and inquiry made.
IN SHAFTS (FALLING DOWN SHAFT)—(*6 deaths*).						
141	3rd January, 12-30 P.M.	Upper Kajora mine, Kajoragram P. O., Bengal.	C. Bhowsinga. .	Raghunandan Dharkar, (*m.*), 32, *Timberman.*	Coal	Deceased was standing in a cage in which a prop 23 feet long was lowered to the bottom of a shaft 103 feet deep. To remove the prop a signal to raise the cage a few feet was given, but it was raised to the shaft top. When the cage was 30 feet from the bottom of the shaft deceased with the prop fell to the bottom of the shaft. He sustained serious injuries to which he succumbed two and a half months later. Inspection and inquiry made.

142	24th January, between 12-30 P.M. to 1 P.M.	Banksimula mine, Charanpur P. O., Bengal.	Bengal Coal Co., Ltd.	Romjan Sheikh, (*m.*), 32, *Pumpman.*	Coal	*During a temporary stoppage of the winding engine, deceased attempted to enter a mine by climbing down an electrical cable hung in a shaft 925 feet deep. After reaching a point estimated at from 200 to 250 feet from the shaft bottom, he apparently lost his grip and fell, being killed instantly. Inspection and inquiry made.*
143	4th April, 11-10 P.M.	Akhalpur mine, Charanpur P. O, Bengal.	Hurriladih Coal Co., Ltd.	Gopal Chandra Das Gupta, (*m.*), 32, *Tub-checker.*	Coal	When a cage arrived at the top of a shaft 209 feet deep, the injured person stepped out of the cage on the wrong side, climbed a fence and fell a distance of 12½′ down the shaft. He sustained a fracture of the spine and died 3 months later. Inspection and inquiry made.
144	16th June, 11 30 P.M.	Surangi mine, Tisri P. O., Bihar.	Chestien Mining Co., Ltd.	Karu Sundy, (*m.*), 25, *Labourer*	Mica	While at work on a scaffold in a shaft some of the planks forming the platform of the scaffold were displaced and two men fell through the scaffold to the bottom of the shaft, a distance of about 66 feet. One was killed instantly and the other was seriously injured. Inspection and inquiry made.
145	18th August, 2-30 A.M.	Fagunl mine, Rajauli P. O., Bihar.	Chatturam Darsanram	Rupan Rai, (*m.*), 26, *Driller.*	Mica	While lifting a cover from the top of a staple pit 80 feet deep, deceased slipped and fell to the bottom of the pit. He was killed instantly. Inspection and inquiry made.
146	7th September, 2 P.M.	Jogiamath mine, Tisri P. O., Bihar.	Indian Mica Supply Co., Ltd.	Lochan Gope, (*m.*), 33, *Labourer.*	Mica	While loading the bucket at a mid inset in a shaft, deceased slipped from the platform and fell to the bottom of the shaft a distance of 50 feet. He was fatally injured. Inspection and inquiry made.

IN SHAFTS (THINGS FALLING DOWN SHAFT)—*(2 deaths.)*

147	15th March, 11-30 A.M.	Lodna mine, Jharia P. O, Bihar.	Lodna Colliery Co. (1920), Ltd.	Bodhi Mondal, (*m.*), 28, *Stone cutter.*	Coal	While three stone cutters were detaching a kibble at the bottom of a newly sunk shaft a mass of stone weighing about 10 cwts fell from the side from a point 50 feet above the bottom. They were seriously injured and one of them died four hours later. Inspection and inquiry made.
148	26th August, 12 NOON.	Sarda Mine, Rajauli P. O., Bihar.	Chatturam Horilram Ltd.	Hulas Singh, (*m.*), 30, *Labourer.*	Mica	A basket of debris was being hoisted by a windlass up a shaft 60 feet deep, when it became disconnected from the hoisting rope and fell a distance of 15 feet to the bottom of the shaft. Deceased sustained serious injuries which proved fatal shortly after. Inspection and inquiry made.

BY EXPLOSIVES—*(10 deaths.)*

149	1st January, 2-45 P	Munsar mine, Kandri P. O., Central Provinces.	Central Provinces Manganese Ore Co., Ltd.	Dalla, (*m.*), 27, *Driller.*	Manganese.	Three men were drilling a hole in a winze when it appears that a misfired shot was pierced and exploded. One of the men was killed instantly and the others were seriously injured. Inspection and inquiry made.

APPENDIX II—*contd.*

Fatal Accidents during the year 1938—*contd.*

Serial number.	Date and hour of accident.	Name and situation of mine.	Name of owner.	Name, sex, age and occupation of person killed.	Name of mineral worked.	Cause of accident and remarks.
			BY EXPLOSIVES—(*11 deaths*)—*contd.*			
150	18th January, 12 NOON.	New Satgram mine, Searsol Rajbari P. O., Bengal.	New Satgram Coal Co., Ltd.	Behari Gope (*m.*), 35, *Shot-firer.*	Coal	While deceased was firing five shots in a gallery, one of them prematurely exploded. He sustained serious injuries to which he succumbed the following day. Inspection and inquiry made.
151	1st February, 5 P.M.	Samanbank mine, Jhumri-Telaiya P. O., Bihar.	Manji Bechar.	Sukar Rai, (*m.*), 30, *Driller.*	Mica	Two men were drilling a hole in the bottom of a winze, when their drill struck an unexploded charge of gelignite and an explosion occurred. One of the men was fatally injured and the other received minor injuries. Inspection and inquiry made.
152	29th March, 2 P.M.	Kargali mine, Bokaro P. O., Bihar.	State Railways' Coal Department.	Madho Singh, (*m.*), 45, *Labourer.*	Coal	Deceased failed to take proper shelter during blasting operations and he was struck and fatally injured by a projected piece of stone. Inspection and inquiry made.
153	10th May, 1-45 P.M.	Borai Buru mine, Bara Jamda P. O., Bihar.	Pacific Minerals, Ltd.	Raya Ho, (*m.*), 28, *Shot-firer.*	Manganese.	While preparing a charge of gunpowder deceased was seriously burnt by an ignition of 2 lbs. of gunpowder in a powder case. He succumbed to his injuries 16 days after the accident. It is presumed that he attempted to smoke and thus caused the ignition of the gunpowder. Inspection and inquiry made.
154	20th June, 4 P.M.	Moda Harda mine, Sanod P. O., Rajputana.	Kanahiyalal & Company.	Harji Gujar, (*m.*), 18, *Miner.*	Mica	A miner was struck and fatally injured by stones projected a distance of 50 feet by blasting operations in an open working. Inspection and inquiry made.
155	26th June, 6-30 A.M.	Banksimula mine, Charanpur P. O., Bengal.	Bengal Coal Co., Ltd.	Hari Muchi, (*m.*), 35, *Line Mistry.*	Coal	Three shots, which were fired in a deep gallery, blew through into a rise gallery, and deceased, who had unexpectedly entered the latter gallery, was fatally injured by pieces of coal projected by the shots. Inspection and inquiry made.
156	22nd August, 7-15 A.M.	Jogta mine, Sijua P. O., Bihar.	Agabeg Brothers, Ltd.	Meghoo Chamar, (*m.*), 43, *Coal-cutter.*	Coal	A miner took a canister containing 4 lbs. of gunpowder to his quarters and suspended it on a nail in the wall of the verandah. The canister fell to the floor and the gunpowder was ignited by an open fire burning in one corner of the verandah. His father was seriously burned and died five days later. Inspection and inquiry made.

157	22nd September. 2-30 P.M.	Basaria mine, Tisri P. O., Bihar.	Chrestien Mining Co., Ltd.	Turabali Meah, (*m.*), 25, *Driller.*	Mica .	Deceased and another driller were cleaning out an old prospecting pit when apparently a misfired charge was struck and exploded. Deceased sustained fatal injuries and his companion was seriously injured. Inspection and inquiry made.
158	27th November, 5-30 A.M.	Jamuria mine, Charanpur P. O., Bengal.	Equitable Co., Ltd.	Durga Das Chattoraj, (*m.*), 34, *Shot-firer.*	Coal .	During blasting operations deceased, who had taken shelter behind the train of tubs, at a point about 70 feet away, was struck on the head by a piece of coal, which was projected by the shot. He sustained injuries to which he succumbed six days later. If a longer shot firing cable had been used, and deceased had taken adequate shelter, the accident would not have occurred. Inspection and inquiry made.
			IRRUPTIONS OF WATER—(*2 deaths*).			
159	6th May, 4 P.M.	Sitanala mine, Bhojudih P. O., Bihar.	Mohatta Brothers	(1) Hapna Majhi, (*m.*), 36, *Coal-cutter.* (2) Hingul Muchi, (*m.*), 24, *Trammer.*	Coal .	A miner passed through a fence and was cutting the side of a main heading when a thin rib of coal between the heading and a water-logged dip gallery collapsed and the gallery was inundated. He and a trammer were carried away by the inrush of water and sustained fatal injuries Inspection and inquiry made.
			HAULAGE—(*40 deaths*).			
160	3rd February, 10-30 A.M.	Bhagaband mine, Jharia P. O., Bihar.	Borrea Coal Co., Ltd.	Jion Roy, (*m.*), 35, *Trammer.*	Coal .	While deceased was guiding a set of empty tubs at a crossing, one of the tubs became derailed, causing him to slip and fall between the tubs. He sustained serious injuries to which he succumbed three days later. Inspection and inquiry made.
161	7th February, 4-15 P.M.	Isabella mine, Nudkhurkee P. O., Bihar.	Kumar Sarat Kumar Roy.	Nehala Gope, (*m.*), 30, *Trammer.*	Coal .	A loaded tub, which had been left standing on a tram-line dipping at 1 in 70 by placing slack coal in front of the wheels, gravitated and ran wild. A trammer, who was walking on the tram-line was struck and seriously injured by the tub. He succumbed to his injuries 21 days after the accident. If a proper sprag had been inserted in one of the wheels of the tubs the accident could have been avoided. Inspection and inquiry made.
162	12th February, 7 A.M.	Siduli mine, Ukhara P. O., Bengal.	Siduli Colliery Company.	Mithoo Mahato, (*m.*), 36, *Trammer.*	Coal .	Three trammers were pushing with their heads a loaded tub which collided with another loaded tub gravitating down the tram line in the opposite direction. Deceased sustained internal injuries and died half an hour later. Inspection and inquiry made.

APPENDIX II—*contd.*

Fatal Accidents during the year 1938—*contd.*

Serial number.	Date and hour of accident.	Name and situation of mine.	Name of owner.	Name, sex, age and occupation of person killed.	Name of mineral worked.	Cause of accident and remarks.
			HAULAGE—(*40 deaths*)—*contd.*			
163	16th February, 1 P.M.	Barkui mine, Parasia P. O., Central Provinces.	Pench Valley Coal Co., Ltd.	Sheopursan, (*m*), 30, *Trammer.*	Coal .	Two loaded tubs became detached from an endless haulage rope while they were being lowered down a road dipping at 1 in 35. Deceased, who was working on the road, became confused stepped in front of the runaway tubs, was knocked down and dragged a distance of 80 feet. He sustained injuries to which he succumbed 12½ hours later. Inspection and inquiry made.
164	25th February, 4-40 P.M.	Sirka mine, Argada P. O., Bihar.	South Karanpura Coal Co., Ltd.	Sobar Bhuiya, (*m.*), 55, *Coal-cutter.*	Coal .	A loaded side-tipping tub was being hand trammed down a gradient of 1 in 100, when it accidentally derailed and overturned on to deceased who was passing by the side of the tub. He was seriously injured and succumbed to his injuries 33 days after the accident. Inspection and inquiry made.
165	26th February, 9-30 P.M.	Victoria mine, Kulti P. O., Bengal.	New Beerbhoom Coal Co., Ltd.	Rabindra Nath Banerjee, (*m*), 38, *Pump man.*	Coal .	A pump attendant was fatally injured when an empty tub ran wild from the top of a drift dipping at 1 in 12. The accident would not have occurred if the attendants at the top of the drift had not lowered the tub below the automatic catch. Inspection and inquiry made.
166	8th March, 8-30 P.M.	Dishergarh West mine, Dishergarh P. O., Bengal.	Equitable Coal Co, Ltd.	Jhari Posman, (*m*), 48, *Trolley-man.*	Coal .	Deceased was attempting to re-rail a loaded tub when he slipped, and one of the wheels fell on his right foot. He sustained injuries to which he succumbed three days later. Inspection and inquiry made.
167	25th March, 4-30 A.M.	Barmondia mine, Sitarampur P. O., Bengal.	New Beerbhoom Coal Co., Ltd.	Bhola Nath Roy, (*m*), 28, *Trammer.*	Coal .	While a set of six loaded tubs was about to be lowered down a haulage road, dipping at about 1 in 30, the first four tubs, which had not been coupled to the last two, ran amain. After having travelled a distance of about 700 feet, they struck deceased and killed him instantly. Inspection and inquiry made.
168	26th March 10-30 A.M.	Ajita mine, Manoharpur P. O., Bihar.	Bengal Iron Co., Ltd.	Mansuk Munda, (*m.*), 38, *Trolley-man.*	Iron ore	Deceased attempted to cross a tram line in front of a loaded tub which was being hand trammed down a gradient of 1 in 70, when his left foot was run over and seriously injured. He died 9 days later. Inspection and inquiry made

169	8th April, 10-30 P.M.	West Jamuria mine, Charanpur P. O., Bengal.	West Jamuria Coal Co., Ltd.	Hira Singh, (*m.*), 53, *Pump-man.*	Coal	A pump attendant was walking up a haulage road with a gradient of 1 in 15 when he was struck and killed instantly by the loaded tubs which had run away from the top of the road. Inspection and inquiry made.
170	9th April, 5-15 P.M.	Ekra mine, Bansjora P. O., Bihar.	Maharaja S. C. Nandy.	Banuu Meah, (*m.*), 24, *Tolleyman.*	Coal	While a haulage hand was guiding a rake of four full tubs round a curve at the junction of a level roadway and a haulage road dipping at 1 in 7, three tubs became detached and ran back. He was crushed against the side of the level roadway when the tubs over-turned and was fatally injured. The accident would not have occurred if (*a*) an efficient drag or back-stay had been used, or (*b*) if the pin of a drawbar "D" link had been rivetted in position. Inspection and inquiry made.
171	13th April, 10-30 P.M.	Barkui mine, Parasia P. O., Central Provinces.	Pench Valley Coal Co., Ltd.	Jetheo Gond, (*m.*), 20, *Trammer.*	Coal	Deceased was struck and fatally injured by a tub which ran wild on an underground haulage plane. A runaway switch was provided, but it was closed at time of accident. Inspection and inquiry made.
172	6th May, 8-30 A.M.	Katras-Choitodih mine, Katrasgarh P. O., Bihar.	Barrakar Coal Co., Ltd.	Shyama Rajwar, (*m.*), 28, *Trammer.*	Coal	Deceased was attempting to re-rail a loaded tub in a set of four while the set was in motion. The third and fourth tubs overturned, crushing him under the third one. He was killed instantly. Inspection and inquiry made.
173	7th May, 10-30 P.M.	Newton Chickli mine, Parasia P. O., Central Provinces.	Newton Chickli Collieries, Ltd.	Raja Ram Kumbi, (*m.*), 38, *Labourer.*	Coal	While a set of loaded tubs was being lowered down a shaft level, deceased walked unobserved on to the level and was crushed between the tubs and the side of a pillar. The injuries proved fatal six days later. If he had used the travelling road provided the accident would not have occurred. Inspection and inquiry made.
174	20th May, 2-30 P.M.	Ballarpur mine, Ballarpur P. O., Central Provinces.	Sir Biscessardas Daga and Sir M. B. Dadabhoy.	Saknora Malloo, (*m.*), 42, *Door-attendant.*	Coal	Deceased was knocked down and run over by a loaded tub on a main shaft level. He sustained injuries to which he succumbed one hour later. Inspection and inquiry made.
175	21st May, 5 A.M.	Mahakali mine, Chanda P. O., Central Provinces.	Abbobakar Abdulrehman & Co.	Mallaya Lingaya, (*m.*), 25, *Loader.*	Coal	While a loader was sleeping on an underground tramline, he was run over and seriously injured by two loaded tubs which were being pushed along the level. He died 2½ months later. Inspection and inquiry made.
176	5th June, 8-30 A.M.	Dishergarh West mine, Dishergarh P. O., Bengal.	Equitable Coal Co., Ltd.	Kalu Roy, (*m.*), 38, *Trolleyman.*	Coal	After giving the signal to haul in—by a train of 12 empty tubs from a shaft level, a trolleyman stepped to one side of the road. The rear tub of the train became derailed and struck him inflicting internal injuries to which he succumbed a few hours later. Inspection and inquiry made

APPENDIX II—*contd.*

Fatal Accidents during the year 1938—*contd.*

Serial number.	Date and hour of accident.	Name and situation of mine.	Name of owner.	Name, sex, age and occupation of person killed.	Name of mineral worked.	Cause of accident and remarks.
			HAULAGE—(*40 deaths*)—*contd.*			
177	10th June, 5 A.M.	Methani mine, Sitarampur P. O., Bengal.	Aldih Coal Co., Ltd.	Sadhram Keot, (*m.*), 29, *Trammers' sirdar.*	Coal	Deceased and his mate were attempting to re-rail three loaded tubs, when the second tub turned over and fell on deceased. He sustained injuries to which he succumbed five days later. Inspection and inquiry made.
178	11th June, 12 NOON.	Damua mine, Bamhanwara P. O., Central Provinces.	Kanhan Valley Coal Co., Ltd.	Bhao Singh, (*m.*), 23, *Trammer.*	Coal	An empty tub ran away on a haulage incline, dipping at 1 in 3, and struck deceased, causing injuries to which he succumbed eleven hours later. If the stop-block, which was provided at the top of the incline, had been closed, the accident would have been avoided. Inspection and inquiry made.
179	16th June, 6 P.M.	Datla mine, Junnordeo P. O., Central Provinces.	Amalgamated Coal-fields, Ltd.	Mukandi, (*m.*), 26, *Trammer.*	Coal	Deceased was illegally riding on a train of tubs which was being drawn up a haulage slope, when he fell and was fatally injured. Inspection and inquiry made.
180	18th June, 1-30 A.M.	Ekra Khas mine, Bansjora P. O., Bihar.	Maharaja S. C. Nandy.	Logan Majhi, (*m.*), 35, *Loader.*	Coal	While a rake of 9 empty tubs was being lowered round a curve off a haulage road into a tramming level four tubs became derailed. A loader who was waiting for an empty tub was pinned between one of the derailed tubs and the side of the roadway and was fatally injured. He had been warned not to approach the curve. Inspection and inquiry made.
181	21st June, 2-15 A.M.	Sodepur (Nos. 9 & 10 Pits) mine, Sunderchak P. O., Bengal.	Bengal Coal Co., Ltd.	Sankar Bauri, (*m.*), 30, *Set-rider.*	Coal	Deceased was riding on a train of tubs which was being drawn up an underground haulage road, when he fell off and was run over. He was killed instantly. Inspection and inquiry made.
182	2nd July, 5 P.M.	Ashakuty mine, Katrasgarh P. O., Bihar.	Chandanmull Indra-kumar.	Imaman Meah, (*m.*), 30, *Trammer.*	Coal	While a set of 4 full tubs was being hauled up a gradient of 1 in 4, the haulage rope broke and the set ran amain for a distance of about 40 feet before overturning. A trammer was struck and fatally injured by the runaway tubs. The breakage of the rope was due to wear and corrosion fatigue. Inspection and inquiry made.

183	15th July, 2-10 P.M.	Amlabad mine, Jealgora P. O., Bihar.	Eastern Coal Co., Ltd.	Rohan Kumar, (*m.*), 32, *Trammer.*	Coal	While a set of six loaded tubs was being drawn up a haulage road rising at 1 in 6, the rope broke and the tubs ran amain, at a distance of about 700 feet down the road and struck deceased. He sustained serious injuries to which he succumbed shortly afterwards. Inspection and inquiry made.
184	23rd July, 7 A.M.	Sodepur (9 & 10 Pits) mine, Sunderchak P. O., Bengal.	Bengal Coal Co., Ltd.	Langi Mahato, (*m.*), 36, *Trammer.*	Coal	While a trammer was removing the haulage clip from a set of loaded tubs near a shaft bottom, the first tub struck him on the head, causing injuries to which he succumbed shortly afterwards. Inspection and inquiry made.
185	18th August, 4 P.M.	Burradhemo mine, Sitarampur P. O., Bengal.	Burradhemo Coal Co., Ltd.	Dadhibal Singh, (*m.*), 28, *Trammer.*	Coal	A set of tubs ran down a slope of 1 in 14 on to a self-acting incline brow, colliding with the haulage rope which dislodged a prop. Deceased was struck by the prop and sustained fatal injuries. Inspection and inquiry made.
186	26th August, 7 A.M.	Sodepur (9 & 10 Pits) mine, Sunderchak P. O., Bengal.	Bengal Coal Co., Ltd.	Rabidutt Missir, (*m.*), 53, *Sirdar.*	Coal	Deceased was riding on an empty set of tubs which was being raised up an incline, when the set ran into a ventilation door. He sustained fatal injuries. Inspection and inquiry made.
187	5th September, 11-30 P.M.	Baragolai mine, Margherita P. O., Assam.	Assam Railways and Trading Co., Ltd.	Ashbahadur Rai, (*m.*), 35, *Contractor's Sirdar.*	Coal	A tub, which was being trammed, suddenly forced open a door which struck deceased. He sustained serious injuries and died from shock 5 hours later. Inspection and inquiry made.
188	8th September, 11 A.M.	Perbelia mine, Neturia P. O., Bihar.	Bengal Coal Co., Ltd.	Dil Mohammad, (*m.*), 44, *Mechanical fitter.*	Coa	While deceased was watching the re-railing of a mine truck carrying a part of a machine trolley on a haulage road the haulage engine was suddenly started. He was struck by the machine trolley and fatally injured. Inspection and inquiry made.
189	9th September, 8 A.M.	Sripur mine, Kalipahari P. O., Bengal.	Lodna Colliery Co., (1920), Ltd.	Madan Gararia, *alias* Sukdeo Gararia, (*m.*), 52, *Coal-cutter.*	Coal	Deceased was travelling on an endless haulage road when he was knocked down and run over by a set of loaded tubs. He sustained serious injuries to which he succumbed 35 hours later. Inspection and inquiry made.
190	10th September, 5 P.M.	Jealgora-Govindpur mine, Katrasgarh P. O., Bihar.	Jealgora-Govindpur Colliery Co.	Sardar Koiri, (*m.*), 25, *Shot-firer.*	Coal	While a tub was being lowered down a haulage road, dipping at 1 in 10, deceased, whose light had been extinguished, became confused and attempted to cross the line. He was knocked down by the moving tub and fatally injured. Inspection and inquiry made.
191	21st September, 5-40 P.M.	Pootkee mine, Kusunda P. O., Bihar.	Eastern Coal Co., Ltd.	Ali Hosain Miah, (*m.*), 37, *Trammers' sirdar.*	Coal	While two empty tubs were being hauled up a drift rising at 1 in 2, deceased attempted from a mid point in the drift to get on the front tub with the intention of riding up the drift. As the roadway was only 5 feet high his head struck the roof and he was killed instantly. He was not authorised to ride. Inspection and inquiry made.

APPENDIX II—*contd.*

Fatal Accidents during the year 1938—*contd.*

Serial number.	Date and hour of accident.	Name and situation of mine.	Name of owner.	Name, sex, age and occupation of person killed.	Name of mineral worked.	Cause of accident and remarks.
			HAULAGE—(*40 deaths*)—*concld.*			
192.	27th September, 6 P.M.	Murulidih mine, Mohuda P. O., Bihar.	Bengal Coal Co., Ltd.	Basu Mahali, (*m.*), 32, *Coal-cutter.*	Coal	While three full tubs were being lowered by hand along a tram line dipping at 1 in 30 a miner crossed the line in front of the tubs. He was knocked down and fatally injured by the tubs. Inspection and inquiry made.
193	22nd October, 4-30 A.M.	Digwardih mine, Jealgora P. O., Bihar.	Tata Iron & Steel Co., Ltd.	Natha Rajwar, (*m.*), 35, *Trolleyman.*	Coal	While a full tub was being re-railed on a haulage road it overturned and fell on to a trolleyman who sustained fatal injuries. Inspection and inquiry made.
194	1st November, 9-30 A.M.	Banksimula mine, Charanpur P. O., Bengal.	Bengal Coal Co., Ltd.	Sukra Bhuiya, (*m.*), 46, *Trammer.*	Coal	While a set of twelve loaded tubs was being lowered to a shaft level, the leading tub got derailed and ran into a set of empty tubs which were being coupled by deceased on the empty line. He was caught between two empty tubs and fatally injured. Inspection and inquiry made.
195	12th November, 10 A.M.	Bejdih mine, Sunderchak P. O., Bengal.	Equitable Coal Co., Ltd.	Adhar Mondal, (*m.*), 28, *Coal-cutter.*	Coal	Owing to the breaking of a coupling three loaded tubs ran amain down a haulage road dipping at 1 in 5, and became derailed at a crossing 30 feet below. A miner who was crossing the haulage road was struck and fatally injured. Inspection and inquiry made.
196	10th December, 6 P.M.	Chandametta mine, Parasia P. O., Central Provinces.	Pench Valley Coal Co., Ltd.	Gorelal, (*m.*), 30, *Loader.*	Coal	Deceased was sitting near a tram line while four loaded tubs were being pushed by trammers. The first tub derailed and overturned on to deceased, fatally injuring him.
197	20th December, 2-45 P.M.	Chasnalla mine, Pathardihi P. O., Bihar.	Indian Iron & Steel Co., Ltd.	Debu Rajwar, (*m.*), 32, *Labourer.*	Coal	The three front tubs of a set of ten empty tubs were not properly coupled to the remainder and when the set was started over the brow of a haulage incline, dipping at 1 in 3, the three tubs ran amain. The banksman became confused and closed the runaway switch and the tubs struck a haulage line attendant some 300 feet lower down the incline, causing fatal injuries. If an intercoupled stop block and runaway switch had been in use the accident would have been avoided. Inspection and inquiry made.

198	21st December, 4 A.M.	Banksimula mine, Charanpur P. O., Bengal	Bengal Coal Co., Ltd.	Achyudananda Banerjee, (*m.*), 27, *Pumpman*	Coal	It is presumed that while deceased was attending to a pump, situated near to a haulage road, he fell asleep and his right foot was run over by a set of loaded tubs. Tetanus supervened and he died 18 days later. Inspection and inquiry made.
199	28th December.	Dhemo Main mine, Sitarampur P. O., Bengal.	Dhemo Main Coal Co., Ltd.	Sonaw Bilaspuri, (*m.*), 29, *Coal-cutter.*	Coal	While a train of seven loaded tubs was being hauled up a haulage road, a coupling broke, allowing six tubs to run back and be overturned by the drag. Three miners, who were walking on the road, were seriously injured by coal thrown off the tubs and one of them died seven hours later. Inspection and inquiry made.
			BY UNDERGROUND MACHINERY—(*2 deaths*).			
200	6th February, 3 A.M.	Toposi mine, Toposi P. O., Bengal.	Bansra Coal Co., Ltd.	Sirdar Meah, (*m.*), 32, *Labourer.*	Coal	Deceased was moving the "anchor post" of a coal cutting machine, when his foot slipped beneath the chain which was in motion. He sustained serious injuries to which he succumbed almost immediately. Inspection and inquiry made.
201	8th September, 4 P.M.	Bankola mine, Ukhra P. O., Bengal.	Burrakur Coal Co., Ltd.	Radhu Bauri, (*m.*), 36, *Machineman.*	Coal	While a coal cutting machine was being moved in to a gallery, the gib jammed on the floor, and as deceased was trying to lever the jib up, the chain guide was thrown round and struck him causing serious injuries. He died four and half months later, gangrene having supervened. Inspection and inquiry made.
			SUNDRIES UNDERGROUND—(*24 deaths*).			
202	7th January, 9-45 A.M	South Bulliari mine, Kusunda P. O., Bihar.	East Indian Coal Co., Ltd.	Manu Majhi, (*m.*), 45, *Sirdar.*	Coal	While withdrawing props from a depillaring area of a seam 21 feet thick, a prop struck deceased on his head and killed him instantly. Inspection and inquiry made.
203	13th January, 5-30 P.M.	Ghorawari mine, Ghorawari P. O., Central Provinces.	Hirdagarh Collieries, Ltd.	Bhadoli, (*f.*), 48, *Surface loader.*	Coal	While deceased was cutting earth in a quarry, close to the exposed walling of an old shaft, a portion of the walling collapsed, and struck her on her right leg. She sustained injuries which caused her death 2½ months later. Inspection and inquiry made.
204	28th January, 7 A.M.	Kargali mine, Bokaro P. O., Binar.	State Railways' Coal Department.	Pardeshi, (*m.*), 38, *Coal-cutter.*	Coal	While removing coal from a bench 22 feet wide in a quarry deceased went too close to the edge of the bench and fell a distance of 34 feet. He sustained injuries which proved fatal shortly afterwards. Inspection and inquiry made.
205	3rd February, 2 P.M.	Devada mine, Chipurupalle P. O., Madras.	Vizianagram Mining Co., Ltd.	Nadipena Soorayah, (*m.*), 20, *Labourer.*	Manganese.	While carrying a basket of earth up a pathway sloping at 1 in 10 in a quarry, deceased lost his balance and fell a distance of 10 feet. He sustained internal injuries which proved fatal 14 hours later. Inspection and inquiry made.

APPENDIX II—*contd.*

Fatal Accidents during the year 1938—*contd.*

Serial number.	Date and hour of accident.	Name and situation of mine.	Name of owner.	Name, sex, age and occupation of person killed.	Name of mineral worked.	Cause of accident and remarks.
			SUNDRIES UNDERGROUND—(24 *deaths*)—*contd.*			
206	9th February, 5 A.M.	Ekra Khas mine, Bansjora P. O., Bihar.	Maharaja S. C. Nundy.	Rushtom Chamar, (*m.*), 55, *Coal-cutter.*	Coal .	After blasting in a depillaring area three miners began to load coal before the place was examined by a competent person when a prop became dislodged and knocked another prop out in falling. One of the miners was struck by the latter prop and killed instantly. Inspection and inquiry made.
207	1st March, 3 P.M.	Jogta mine, Sijua P. O., Bihar.	Agabeg Brothers, Ltd.	Budhu Rewani, (*m.*), 37, *Shot-firer.*	Coal .	While dressing down overburden in a quarry deceased fell from a ladder from a height of about 20 feet and sustained injuries which proved fatal one day later. Inspection and inquiry made.
208	4th March, 8 A.M.	MacLellan mine, Manoharpur P. O., Bihar.	Bengal Iron Co., Ltd.	Sona Ho, (*m.*), 34, *Miner.*	Iron ore.	While levering down a big boulder from a bench of an open working, deceased lost his balance and fell a distance of 20 feet. He sustained serious injuries to which he succumbed a few hours later. Inspection and inquiry made.
209	28th March, 6 A.M.	Bhalgora mine, Jharia P. O., Bihar.	Bhalgora Coal Co., Ltd.	Dhanua Dosad, (*m.*), 25, *Loader.*	Coal .	While a loader was hurriedly leaving a depillaring area in which the roof was 'weighting', he ran into a tub standing on a tram line and sustained injuries to which he succumbed 5½ hours later. Inspection and inquiry made.
210	6th April, 2-30 A.M.	Bhulanbararee mine, Pathardih P. O., Bihar.	Bhulanbararee Coal Co., Ltd.	(1) Akloo Singh, (*m.*), 30; (2) Iswar Gorai, (*m.*), 32; *Stone-cutters.*	Coal .	While water was being used to transport coal down a narrow gallery dipping at 1 in 1·4 two miners went into the gallery to release a stoppage. They were washed down the gallery at a distance of 70 feet and buried in the coal. They died from suffocation before they could be released. Inspection and inquiry made.
211	23rd April, 5-30 P.M.	Banksimula mine, Charanpur P. O., Bengal.	Bengal Coal Co., Ltd.	Baksu Meah, (*m.*), 35, *Labourer.*	Coal .	While a coal-cutting machine was being flitted on a trolley, along a roadway dipping at 1 in 8, it got out of control, and after running a distance of 75 feet the machine fell off the trolley on to deceased, killing him instantly. Inspection and inquiry made.

212	18th May, 11-30 A.M.	Jharia Khas mine, Sijua P. O., Bihar.	Trigunait Brothers (Receiver—Mr. S. C. Mazumdar).	Ramuli Bhuiya, (*m.*), 35, *Loader.*	Coal	While a loader was filling a basket with coal in a depillaring area in a seam, 20 feet thick, a large piece of stone fell in the adjoining goaf and dislodged a prop. The loader was struck by the top end of the prop and fatally injured. Inspection and inquiry made.
213	1st July, 10-45 P. M.	Satpukuria mine, Asansol P. O., Bengal.	Satpukuria and Asansol Collieries, Ltd.	Sankar Bauri, (*m.*), 30, *Onsetter.*	Coal	Deceased, while at work near a shaft bottom, presumably fainted and struck his head on a rail, receiving fatal injuries. Inspection and inquiry made.
214	8th July, 9-15 A. M.	North Tirodi mine, Tirodi P O., Central Provinces.	Central Provinces Manganese Ore Co., Ltd.	Manbhothi, (*f.*), 32, *Labourer.*	Manganese	Deceased was working in an open excavation when a tree, which was being cut down, fell on her inflicting fatal injuries. Inspection and inquiry made.
215	8th July, 12 NOON.	Jharia Khas (Angarpathra) mine, Sijua P. O., Bihar.	Trigunait Brothers, Sirish Chandra Mazumdar (Receiver).	Narain Beldar, (*m.*), 25, *Quarryman.*	Coal	Pillars of coal at the outcrop of a seam, 24 feet thick, which had been formed by underground mining, were being extracted by quarrying. While a quarryman was removing overburden the roof of a gallery collapsed and he fell with the stone—4 feet in thickness, into the gallery and was killed instantly. Inspection and inquiry made.
216	23rd July, 1-45 P.M.	Banksimula mine, Charanpur P. O., Bengal.	Bengal Coal Co., Ltd.	Sahadeb Singh, (*m.*), 34, *Timberman.*	Coal	Deceased was walking along a gallery to dress down some unsound roof coal. When he reached the place a mass of coal, weighing about 1 cwt., fell in front of him from a height of 13 feet. In avoiding the falling coal he tripped and struck his head against a rail, sustaining fatal injuries. Inspection and inquiry made.
217	2nd August, 8 P. M.	Guzdar Kajora mine, Kajoragram P. O., Bengal.	Amritlal Ojha & Co., Ltd.	Bansi Sonar, (*m.*), 25, *Coal-cutter.*	Coal	While levering down loose coal with a crowbar after blasting, a piece of coal fell on the crowbar which struck deceased, inflicting serious injuries to which he succumbed 3½ days later. Inspection and inquiry made.
218	10th August, 1 A. M.	Kurhurbaree mine, Giridih P. O., Bihar.	State Railways' Coal Department.	Balo Chamar, (*m.*), 38, *Coal-cutter.*	Coal	While some stone was being thrown into a goaf a piece of stone struck a prop 16 feet long and displaced it. The prop fell on deceased, killing him instantly. Inspection and inquiry made.
219	15th August, 5 P. M.	Domarkhar mine, Darigaon P. O., Bihar.	Stone Suppliers, Ltd.	Kaila Bax, (*m.*), 25, *Miner.*	Limestone	While removing overburden on the edge of a quarry 25 feet deep, deceased slipped and fell into the quarry, and was killed instantly. Inspection and inquiry made.
220	15th September, 1 A.M.	Angarpathra mine, Katrasgarh P. O., Bihar.	National Coal Co., Ltd.	Ram Sarup Keot, (*m.*), 45, *Coal-cutter.*	Coal	While working in a depillaring area deceased was struck by a dislodged prop, 26 feet in length. He sustained serious injuries and died 42 hours later. Inspection and inquiry made.

APPENDIX II—*contd.*

Fatal Accidents during the year 1938—*contd.*

Serial number.	Date and hour of accident.	Name and situation of mine.	Name of owner.	Name, sex, age and occupation of person killed.	Name of mineral worked.	Cause of accident and remarks.
			SUNDRIES UNDERGROUND—(*24 deaths*)—*concld.*			
221	27th October, 11 P.M.	Bhowra mine, Jealgora P. O., Bihar.	Eastern Coal Co., Ltd.	Gobinda Bauri, (*m.*), 30, *Coal-cutter.*	Coal	A connection between a gallery dipping at 1 in 2 and a level gallery had been effected by a hole 3 ft. high and 1'-6" wide near the roof of the level gallery. While a miner was at work in the dip gallery he slipped through and fell 8 ft. to the floor of the level gallery. He sustained injuries to which he succumbed 7 days later. Inspection and inquiry made.
222	2nd November, 2 P.M.	Bararee mine, Jealgora P. O., Bihar.	East Indian Coal Co., Ltd.	Ram Balak Muchi, (*m.*), 50, *Trammer.*	Coal	While a trammer was removing a sprag from the wheels of a stationary full tub, a second full tub bumped into it. He overbalanced and fell on a lump of coal lying at the side of the line and sustained internal injuries which proved fatal a few hours later. Inspection and inquiry made.
223	10th November, 2-30 P.M.	Badjna mine, Nirshachati P. O., Bihar.	Oriental Coal Co., Ltd.	Bhogsing Rajwar, (*m.*), 30, *Loader*	Coal	Deceased was filling his basket with coal in a gallery 16 feet high, when a ladder, which was standing against the side, suddenly fell on him. He sustained injuries which proved fatal one month later. Inspection and inquiry made.
224	10th November, 10-30 P.M.	Lodna (Nos. 4 & 5 Pits) mine, Jharia P. O., Bihar.	Lodna Colliery Co., (1920), Ltd.	Birju Ruhidas, (*m.*), 35, *Coal-carrier.*	Coal	As a result of movement in a neighbouring goaf, a mass of overhanging coal, 3' × 2'-6" × 1', fell from the corner of a pillar 24 feet high. The falling coal dislodged a prop which struck deceased, inflicting injuries to which he succumbed 37 days later. Inspection and inquiry made.
			BY SURFACE MACHINERY—(*1 death*).			
225	3rd May, 4-50 P.M.	Barmondia mine, Sitarampur P. O., Bengal.	New Beerbhoom Coal Co., Ltd.	Guhiram Mondal, (*m.*), 25, *Labourer.*	Coal	Deceased was assisting a ball mill attendant to put the belt on the fly-wheel, when the fly-wheel reversed. He was caught, dragged under the fly-wheel, and was fatally injured. Inspection and inquiry made.
			ON SURFACE RAILWAYS AND TRAMWAYS BELONGING TO THE MINE—(*17 deaths*).			
226	1st January, 6-15 P.M.	Newton Chickli mine, Parasia P. O., Central Provinces.	Newton Chickli Collieries, Ltd.	Zadoo Mehra, (*m.*), 16, *Wagon-loader.*	Coal	While attempting to cross the railway line between two wagons at the colliery siding, deceased was crushed between the buffers as one of the wagons suddenly moved forward. He was killed instantly. Inspection and inquiry made.

227	6th February, 11 A.M.	Tawa Valley mine, Ghoradongri P. O., Central Provinces.	Walji Bhimji & Sons.	Andrew Abrahim, (*m.*), 57, *Locomotive-driver.*	Coal	While a locomotive was hauling a train of empty tubs on a surface railway, it accidentally became derailed and fell into a cutting 9 feet deep Deceased was killed instantly. Inspection and inquiry made.
228	24th March, 5-30 P.M.	Pansira mine, Manoharpur P. O., Bihar.	Bengal Iron Co., Ltd.	Fadung Ho, (*m*), 23, *Trammer.*	Iron ore	While a set of three loaded tubs was being lowered on a self-acting incline dipping 1 in 2, the last tub became uncoupled and ran wild. A trammer who was working at the bottom of the incline was struck by the tub and killed instantly. Inspection and inquiry made.
229	31st March, 7 A.M.	Sripur mine, Kalipahari P. O., Bengal.	Lodna Colliery Co. (1920), Ltd.	Jhurai Ahir, (*m.*), 30, *Coal-cutter.*	Coal	While wagons were being hand-shunted on a colliery siding, deceased attempted to cross the line between two of the wagons. He was crushed between the buffers and succumbed to his injuries an hour later. Inspection and inquiry made
230	4th May, 11-30 A.M	Kargali mine, Bokaro P. O., Bihar.	State Railways' Coal Department.	Niamat, (*m.*), 30, *Trolleyman.*	Coal	While a set of four loaded tubs was being lowered by hand on a tramline dipping at about 1 in 80, deceased tried to brake the second tub from the rear. He slipped and the rear tub ran over his leg inflicting injuries to which he succumbed a few hours later. Inspection and inquiry made.
231	7th June, 7-30 A.M.	Ghorawari mine, Ghorawari P. O, Central Provinces.	Hirdagarh Collieries, Ltd.	Shekh Kaloo, (*m.*), 50, *Locomotive-driver.*	Coal	On a surface tramline two locomotives collided in a cutting when one of them was derailed The driver of this locomotive sustained injuries which proved fatal five hours later. Inspection and inquiry made.
232	8th June, 9-30 P.M.	Jamadoba mine, Jealgora P. O., Bihar.	Tata Iron & Steel Co., Ltd.	Jagadish Routh, (*m*), 42, *Shale-picker.*	Coal	While two railway wagons were being moved by hand in colliery siding deceased was crushed between the buffers of the wagons and was killed instantly. Inspection and inquiry made.
233	18th June, 11-30 A.M.	Central Salanpur mine, Katrasgarh P. O., Bihar.	Central Salanpur Coal Concern.	Phulmoni Baurin, (*f.*), 22, *Labourer.*	Coal	While a female surface worker was helping to push an empty wagon along a level siding she slipped and her right leg was cut by the rear wheel of the wagon. She died from septicemia five weeks afterwards. Inspection and inquiry made.
234	20th June, 4-30 P.M.	Kajora mine, Kajoragram P.O., Bengal.	K. C. Pal Chowdhury.	Kubja Baurin, (*f.*), 16, *Labourer.*	Coal	While crossing a colliery siding deceased was crushed between the buffers of two loaded wagons and killed instantly. Inspection and inquiry made.
235	8th July, 11-45 A.M.	Munsar mine, Kandri P O., Central Provinces.	Central Provinces Manganese Ore Co., Ltd.	Mahadev Mahar, (*m.*), 35, *Trammer.*	Manganese.	Deceased and his companion were riding on a loaded tub which was gravitating along a tramline with a gradient of 1 in 75. On attempting to brake the tub due to some obstruction on the line, the tub derailed and turned over. Deceased sustained injuries which proved fatal shortly afterwards. Inspection and inquiry made.

APPENDIX II—*contd.*

Fatal Accidents during the year 1938—*contd.*

Serial number.	Date and hour of accident.	Name and situation of mine.	Name of owner.	Name, sex, age and occupation of person killed.	Name of mineral worked.	Cause of accident and remarks.
			ON SURFACE RAILWAYS AND TRAMWAYS BELONGING TO THE MINE—(*17 deaths*)—*contd.*			
236	31st July, 10-15 P.M.	Domarkhar mine, Darigaon P. O., Bihar.	Stone Suppliers, Ltd.	Ganesh, (*m.*), 20, *Shunting porter.*	Lime-stone.	Eight loaded trucks of limestone were shunted off a main line into a siding which dipped towards the main line at 1 in 100. After the locomotive had been detached from the trucks and was returning on the main line, the loaded trucks ran back and struck the locomotive. Deceased, who was riding on the step board of the locomotive, was fatally injured. Inspection and inquiry made.
237	23rd August, 10-30 A.M.	Bhulanbararee mine, Pathardih P. O., Bihar.	Bhulanbararee Coal Co., Ltd.	Anath Bandhu Biswas, (*m.*), 42, *Loading Supervisor.*	Coal	While attempting to lift in position the door of a wagon which was in motion, deceased was crushed between the moving wagon and a wharf wall. He died an hour later as the result of his injuries. Inspection and inquiry made.
238	26th September, 11 A.M.	Khas Joyramdih mine, Nawagarh P. O., Bihar.	Khas Joyramdih Coal Company.	Andhi Bhuiya, (*m.*), 48, *Trammer.*	Coal	Two full tubs about 4 feet apart were each being pushed by three trammers along a surface tramline rising at about 1 in 50. The front tub was arrested by a piece of stone on the line and the second tub overtook the first. One of the trammers who was pushing the front tub was crushed between the tubs and fatally injured. Inspection and inquiry made.
239	22nd November, 5-30 A.M.	Ganeshpur mine, Nawagarh P. O., Bihar.	H. M. Jaini & Sons	Panchu Mahato, (*m.*), 30, *Bankman.*	Coal	In the absence of the authorised engine-driver an attendance clerk attempted to operate a haulage engine at the top of an incline the rope of which was attached to a tub. When the engine was suddenly started the bankman at the top of the incline was knocked down by the tub and sustained fatal injuries. Inspection and inquiry made.
240	23rd November, 4-35 P.M.	Gua mine, Gua P. O., Bihar.	Indian Iron and Steel Co., Ltd.	Ramo Tatin, (*f.*), 23, *Labourer.*	Iron Ore	While walking on a gravity haulage incline deceased was run over by a loaded skip. She sustained injuries which proved fatal a few hours later. Inspection and inquiry made.

241	25th November, 6-45 P.M.	Chandametta mine, Parasia P. O., Central Provinces.	Pench Valley Coal Co., Ltd.	Videshi, (*m.*), 35, *Trammer.*	Coal	While assisting to push a wagon on a railway siding deceased collapsed and expired within a few minutes.
242	2nd December, 5-30 A.M.	Victoria West mine, Barakar P. O., Bengal.	New Beerbhoom Coal Co., Ltd.	Babu Lal Roy, (*m.*), 48, *Trammer.*	Coal	While pulling a tub off a cage, deceased slipped, and his toe was injured by a wheel of the tub. He received medical attention but died as a result of tetanus eleven days later. Inspection and inquiry made.

MISCELLANEOUS ON SURFACE—(*6 deaths.*)

243	27th February, 9-30 A.M.	Tellabodu mine, Sydapuram P. O., Madras.	Tellabodu Co., Ltd.	Potturi China Narisi Gadu, (*m.*), 26, *Labourer.*	Mica	Deceased with four others was carrying a long wooden beam on his shoulder. While attempting to place the beam on the ground he was knocked down and struck by it. He sustained serious injuries to which he succumbed about a month later. Inspection and inquiry made.
244	12th October, 8-45 A.M.	Makerwal mine, Tra: P. O., Punjab.	R. S. Lala Ishar Das Kapur and Mr. C. Bevan-Petman.	Sakhar Khan, (*m.*), 33, *Labourer.*	Coal	Deceased along with several other work-persons was engaged in moving a heavy pulley, 6 feet in diameter, when the pulley fell to one side and fractured his right leg. He developed pneumonia and died 9 days after the accident. Inspection and inquiry made.
245	10th November, 8 A.M.	East Bhuggutdih mine, Jharia P. O., Bihar.	East Bhuggutdih Colliery Co., Ltd.	Ram Deo Bhuiya, (*m.*), 28, *Trammer.*	Coal	A full tub was overturned by three trammers at the top of a slope 18 feet high at a loading depot. The tub slipped 4 feet down the slope and a trammer attempted to push it to the bottom. When the tub started to move the loose coal on the slope slipped and the trammer rolled to the bottom of the slope where the tub fell on him. He was fatally injured. Inspection and inquiry made.
246	23rd November, 10-30 A.M.	Parbelia mine, Neturia P. O., Bihar.	Bengal Coal Co., Ltd.	Marwari Dome, (*m.*), 38, *Labourer.*	Coal	While grease was being heated in a drum it accidentally took fire. Deceased threw a bucket of water on the burning grease to extinguish it, when it splashed on him. He received severe burns from which he died four days later. Inspection and inquiry made.
247	27th November, 4 A.M.	Angarpathra mine, Katrasgarh P. O., Bihar.	National Coal Co., Ltd.	Bhagia Bhuiyan, (*f.*), 52, *Trammer.*	Coal	A haulage engine was placed at right angles to the centre line of an inclined haulage road on the surface and the rope passed round two pulleys. While a rake of 10 full tubs was being hauled up the incline one pulley was dislodged and the flying rope struck two female trammers killing one instantly and seriously injuring the other. If a suitable pulley had been used and it had been properly installed the accident would not have occurred. Inspection and inquiry made.
248	27th November, 10-30 A.M.	Chunhatta mine, Japla P. O., Bihar.	Sone Valley Portland Cement Co., Ltd.	Bhulen Kandu, (*m.*), 30, *Labourer.*	Limestone	Deceased was breaking stone, when a piece struck his leg. He died from septicemia three weeks later. Inspection and inquiry made.

APPENDIX II—*contd.*

Fatal Accidents during the year 1938—*contd.*

Serial Number.	Date and hour of accident.	Name and situation of mine.	Name of owner.	Name, sex, age and occupation of person killed.	Name of mineral worked.	Reason for exclusion.	Cause of accident and remarks.
			FATAL ACCIDENTS NOT INCLUDED IN THE STATISTICS—(*24 deaths*).				
1	20th January, 11 A.M.	Datla Mine, Junardeo P. O., Central Provinces.	Amalgamated Coalfields, Ltd.	Nabli Loharin, (*f.*), 50, *Not employed.*	Coal	Not employed.	While deceased was crossing a surface endless haulage she fell over the rope and was struck on her right leg by a slowly moving tub. She sustained injuries to which she succumbed nine days later. Inspection and inquiry made.
2	7th March, 9-30 A.M.	Jamuria Mine, Charanpur P. O., Bengal.	Equitable Coal Co., Ltd.	Alladata, (*m.*), 38, *Driller.*	Coal	Not a mining accident.	A driller accidentally fell from a loading wharf on to a siding 2′ 9″ below and sustained internal injuries to which he succumbed 3 hours later. Inspection and inquiry made.
3	13th March, 7 A.M.	Lodna Mine, Jharia P. O., Bihar.	North Burrakur Coal Co., Ltd.	Bhiku Mahato, (*m.*), 50, *Labourer.*	Coal	Not a mining accident.	Deceased was cutting earth from an embankment for brick making when a mass of earth, measuring 6′ × 4′ × 9″ thick, fell on him from a height of 8 feet. He was killed instantly. Inspection and inquiry made.
4	17th March, 11-30 A.M.	Pure Bhuggatdih Mine, Jharia P. O., Bihar.	Pure Bhuggatdih Colliery Company.	Firtu Rajwarin, (*f.*), 25, *Not employed.*	Coal	Not employed.	Deceased was drowned in an abandoned water-logged quarry which was adequately fenced. Inspection and inquiry made.
5	20th March, 8-30 P.M.	Methani Mine, Sitarampur P. O., Bengal.	Aldih Coal Co., Ltd.	Juban Majhi, (*m.*), 50, *Miners' Sirdar.*	Coal	Not a mining accident.	Deceased was run over and fatally injured by a train of loaded wagons on a railway siding. Inspection and inquiry made.
6	1st April, 11 A.M.	Alkusa-Nyadee Mine, Kusunda P. O., Bihar.	Alkusa-Nyadee Collieries Company.	Laljit Bhakta, (*m.*), 47, *Trolleyman.*	Coal	Not a mining accident.	Deceased was found drowned in a boiler feed tank which was adequately fenced. Inspection and inquiry made.
7	2nd April, 12 NOON.	Dandot Mine. Dandot P. O., Punjab.	Executors of the Estate of late Lala Shankar Dass.	Not known, (*m.*), 40, *Not employed.*	Coal	Not employed.	While walking along a surface tramline, deceased was overtaken and run over by a train of loaded tubs. Inspection and inquiry made.

8	5th April, 10 A.M.	Dobari Mine, Jharia P. O., Bihar.	S. B. Banerjee .	Nanki Baldaria, (*f.*), 30, *Not employed.*	Coal .	Not employed.	Deceased was found drowned in an abandoned water logged quarry. Inspection and inquiry made.
9	29th April, 9 A.M.	Ghorawari Mine, Gorawari P. O., Central Provinces.	Hirdagarh Collieries, Ltd.	Gariba, (*m.*), 30, *Carter.*	Coal .	Not a mining accident.	A cart filled with coal was being drawn up a hill by two bullocks when they took fright. The cart became detached and ran down the hill into an old subsidence. Deceased hung on to the cart and was fatally injured. Inspection and inquiry made
10	4th May, 8 P.M.	Bejdih Mine, Sundarchak P. O., Bengal.	Equitable Coal, Co., Ltd.	Nuni Mejhian, (*f.*), 20, *Not employed.*	Coal .	Not a mining accident.	While a woman was walking along a colliery siding, she fell and struck her face on the rail, and sustained injuries to which she succumbed almost immediately. Inspection and inquiry made.
11	11th May, 6 A M.	Eklehra Mine, Parasia P. O., Central Provinces.	Amalgamated Coalfields, Ltd.	Sarbadi Basodan, (*f.*), 30, *Not employed.*	Coal .	Not a mining accident.	Deceased was collecting coal for her own use from the colliery siding when the loading wharf collapsed, injuring her fatally. Inspection and inquiry made.
12	7th June, 11 A.M.	Godhar Mine, Kusunda P. O., Bihar.	B. K. Roy . .	Chedu Mahato, (*m.*), 33, *Not employed.*	Coal .	Not a mining accident.	While taking a bath, deceased was drowned in a tank regularly used for bathing purposes. Inspection and inquiry made.
13	27th June, 9-30 A.M.	Banksimula Mine, Charanpur P. O., Bengal.	The Bengal Coal Co, Ltd.	Chandi Charan Banerjee, (*m*), 53, *Colliery Doctor.*	Coal .	Not a mining accident.	Deceased was knocked down by a motor car and sustained fatal injuries.
14	14th July, 11 A.M.	Khas Govindpur Mine, Katrasgarh P. O., Bihar.	Khas Govindpur Coal Co.	Chaman Bhuiya, (*m.*), 45, *Coal-cutter.*	Coal .	Not a mining accident.	Deceased died in the mine as the result of heart failure. Inspection and inquiry made.
15	14th July, 6-35 A.M.	Bokaro Mine, Bokaro P. O., Bihar.	East Indian Railway and Bengal Nagpur Railway.	Jethoo Gorh, (*m.*), 37, *Coal-cutter.*	Coal .	Not a mining accident.	Deceased feeling ill was walking from his working place in a quarry when he collapsed and died. Inspection and inquiry made.
16	25th July, about 4 P.M.	Mudidih (Teetulmuri), Mine, Sijua P. O., Bihar.	Burrakur Coal Co., Ltd., [Owner of H. T. Transmission line—Sijua (Jherriah) Electric Supply Co., Ltd.].	Name not known, (*m.*), about 35, *Not employed.*	Coal .	Not a mining accident.	Deceased climbed a tower, presumably to remove young birds from a nest at the top of the tower. He came into contact with a living conductor; received a severe shock at about 3800 volts to earth and fell to the ground. The pressure of the system was 6,600 volts A. C. with the neutral earthed. Inspection and inquiry made.

APPENDIX II—*contd.*

Fatal Accidents during the year 1938—*concld.*

Serial Number.	Date and hour of accident.	Name and situation of mine.	Name of owner.	Name, sex, age and occupation of person killed.	Name of mineral worked.	Reason for exclusion.	Cause of accident and remarks.
			FATAL ACCIDENTS NOT INCLUDED IN THE STATISTICS—(*24 deaths*)—*contd.*				
17	29th July, 3-45 P.M.	Burra Golai Mine, Margherita P. O., Assam.	Assam Railways and Trading Co., Ltd.	Ramlakhan Barai, (*m.*), 19, *Trammer.*	Coal .	Not a mining accident.	While at work underground a trammer was struck by a fellow workman and knocked down. He collapsed almost immediately and died from shock two hours later. Inspection and inquiry made.
18	8th August.	Kurhurbaree Mine, Giridih P. O., Bihar.	State Railways' Coal Department.	Kani Bhuiya, (*m.*, 60, *Not employed.*	Coal .	Not employed.	Deceased who was intoxicated fell into a water-logged quarry and was drowned. The quarry was properly fenced. Inspection and inquiry made.
19	26th September, 6-15 A.M.	Kargali Mine, Bokaro P. O., Bihar.	State Railways' Coal Department.	Kasowa, (*m*), 30, *Coal-cutter.*	Coal .	Not a mining accident.	While crossing a railway line deceased was knocked down by an empty wagon which was being pushed back by a locomotive. He sustained serious internal injuries and died shortly afterwards. Inspection and inquiry made.
20	28th September, 1-30 P.M.	Newton Chickli Mine, Parasia P. O., Central Provinces.	Newton Chickli Collieries, Ltd.	Satto Goulin, (*f.*), 70, *Not employed.*	Coal .	Not a mining accident.	Deceased was run over and fatally injured by a set of full tubs while crossing a surface endless haulage road. Inspection and inquiry made.
21	20th December, 11-30 A.M.	South Kajora mine, Ondal P. O., Bengal.	Western India Coal Syndicate, Ltd.	Cherru Gara, (*m.*), 3, *Not employed.*	Coal .	Not a mining accident.	While sleeping in a closed up room a woman and her son, aged 3 years, were poisoned by carbon monoxide fumes given off from a coal fire burning inside the room. The child succumbed to the effects of the fumes but the woman recovered after artificial respiration had been given. Inspection and inquiry made.
22	31st December, 1 P.M.	Bararee Mine, Jealgora P. O., Bihar.	East Indian Coal Co., Ltd.	Balgobind Bhuiya, (*m.*), 50, *Not employed.*	Coal .	Not a mining accident.	Deceased who was subject to epileptic fits, was drowned while bathing in a tank containing 3 feet of water. Inspection and inquiry made.

23	21st December, 4-30 A.M.	Junnordeo No. 2 Mine, Junnordeo P. O., Central Provinces.	R. S. H. Verma & M. Kanhailal.	Mulchand Sonar, (*m.*), 40, *Not employed.*	Coal	Not employed.	Deceased was run over by a locomotive which was approaching a siding with loaded tubs. He sustained fatal injuries.
24	25th December, 4 P.M.	Datla Mine, Junnordeo P. O., Central Provinces.	Amalgamated Coalfields, Ltd.	Nawarkhan, (*m.*), 26, *Surface Trammer.*	Coal	Not a mining accident.	Deceased was asleep, when his clothing caught fire, and he sustained burns to which he succumbed about three months later.

APPEN

Table

Statement of fatal and serious accidents in and about Mines

FATAL

Province.	District and Mineral field.	Number of separate fatal accidents.	Number of deaths.						
			Underground.		Open workings.		Surface.		
			Males.	Females.	Males.	Females.	Males.	Females.	Total.
Assam	Lakhimpur—Makum coalfield.	7	8	...	...	...	...	...	8
Bengal (and part of Bihar).	Raniganj coalfield	88	103	...	...	1	4	1	109
Bihar	Jharia coalfield	78	72	...	2	...	7	2	83
	Bokaro ,,	4	2	...	1	...	1	...	4
	Karanpura ,,	2	1	.	1	...	...	...	2
	Giridih ,,	3	3	...	...	...	...	..	3
Central Provinces	Betul	1	...	...	...	...	1	...	1
	Chanda	2	2	...	...	...	...	...	2
	Chhindwara—Pench Valley coalfield.	25	24	...	...	1	3	...	28
	Yeotmal	..	...	...	...	...	...	...	...
Orissa	Sambalpur—Hingir-Rampur coalfield.	..	...	...	...	...	...	...	...
Punjab	Salt Range coalfield	7	7	.	...	...	1	...	8
	Total (Coal)	217	222	...	4	2	17	3	248

DIX II—*contd.*

No. 2.

regulated by the Indian Mines Act, during the year 1938.

ACCIDENTS.				SERIOUS ACCIDENTS.											
Death rate per 1,000 persons employed.				Number of separate serious accidents.	Number of persons seriously injured.							Serious injury rate per 1,000 persons employed.			
					Underground.		Open workings.		Surface.						
Underground.	Open workings.	Surface.	Underground, Open workings and Surface.		Males.	Females.	Males.	Females.	Males.	Females.	Total.	Underground.	Open workings.	Surface.	Underground, Open workings and Surface.
AL															
5·96	...	...	4·16	90	83	...	..	...	6	1	90	61·85	...	12·96	46·85
2·27	0·67	0 24	1·61	259	222	...	...	...	37	9	268	4·90	...	3·18	3·95
1·37	0·30	0·31	0·91	402	334	...	1	2	71	7	415	6·35	0·45	2·65	4·68
0 75	0·12	0·38	0·07	31	10	...	10	7	7	...	34	3·71	2·09	2 63	2 53
0·63	0·55	...	0·45	10	3	...	1	1	5	...	10	1·89	1·11	4·88	2·27
0·66	...	.	0·49	68	66	...	...	...	1	2	69	14·52	..	1·89	11·19
...	..	22·22	9·80	1	...	...	...	...	1	...	1	...	..	22 22	9·80
0·94	...	...	0·70	24	21	...	...	...	3	...	24	9·86	...	4·12	8·40
3·59	1·79	0·91	2·66	43	31	...	3	...	9	...	43	4·64	5·37	2·73	4·08
...	..	...	...	1	1	...	...	...	...	...	1	6·41	...	...	3·75
...	...	...	...	2	2	...	...	...	...	...	2	7·41	...	...	5·48
4·31	...	0·91	2·81	15	10	...	...	...	5	...	15	6·16	...	4 57	5·27
1·85	0·32	0·32	1·23	946	783	...	15	10	145	19	972	6·51	1·33	2·64	4·83

APPEN

Table

Statement of fatal and serious accidents in and about Mines

Province.	District and Mineral field.	FATAL								
		Number of separate fatal accidents.	Number of deaths.							
			Underground.		Open workings.		Surface.			
			Males.	Females.	Males.	Females.	Males.	Females.	Total.	
										IRON
Bihar	Singhbhum . .	4	...	...	2	...	1	1	4	
										MANGA
Bihar	Singhbhum . . .	1	...	...	1	...	...	...	1	
Bombay . . .	Panch Mahals . .	...	...	...	...	...	...	...	...	
Central Provinces	Balaghat . . .	2	...	...	1	1	...	...	2	
	Bhandara . . .	...	...	...	...	...	...	...	...	
	Nagpur . . .	2	1	...	...	...	1	...	2	
Madras . . .	Vizagapatam . .	1	...	...	1	...	...	...	1	
	Total (Manganese Ore)	6	1	...	3	1	1	...	6	
										CHROMITE
Baluchistan . . .	Upper Zhob . . .	1	...	...	1	...	...	...	1	

DIX II—*contd.*

No. 2—*contd.*

regulated by the Indian Mines Act, during the year 1938—*contd.*

ACCIDENTS.				SERIOUS ACCIDENTS.											
Death rate per 1,000 persons employed.				Number of separate serious accidents.	Number of persons seriously injured.							Serious injury rate per 1,000 persons employed.			
					Underground.		Open workings.		Surface.						
Underground.	Open workings.	Surface.	Underground, Open workings and Surface.		Males.	Females.	Males.	Females.	Males.	Females.	Total.	Underground.	Open workings.	Surface.	Underground, Open workings and Surface.
ORE															
...	0·27	0·89	0·42	19	...	...	10	2	6	1	19	...	1·63	3·12	1·98
NESE ORE															
...	1·17	...	1·01	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	12	4	...	..	...	6	2	12	19·90	...	14·55	6·72
...	0·21	...	0·16	12	...	...	3	3	4	2	12	...	0·62	2·33	0·93
...	...	...	...	14	..	...	8	2	6	8	14	...	1·21	10·53	2·80
9·09	...	1·71	0·28	6	2	..	4	2	...	...	8	18·18	0·92	...	1·11
...	0·41	...	0·37	...	...	...	...	...	...	...	...	...	...	...	..
1·04	0·15	0·20	0·19	44	6	...	10	7	16	7	46	6·22	0·65	4·51	1·42
ORE															
...	4·93	...	2·79	1	1	...	...	...	...	.	1	55·56	...	...	2·79

APPEN

Table

Statement of fatal and serious accidents in and about Mines

Province.	District and Mineral field.	Number of separate fatal accidents.	Number of deaths.						
			Under-ground,		Open workings.		Surface.		
			Males.	Females.	Males.	Females.	Males.	Females.	Total.
FATAL									
									COPPER
Bihar	Singhbhum	1	1	...	...	...	...	...	1
									MI
Bihar	Gaya	1	1	...	...	...	...	...	1
	Hazaribagh	7	5	...	5	...	...	...	10
	Manbhum	..	...	...	...	...	...	...	...
	Monghyr	1	...	...	1	...	...	...	1
Madras	Nellore	2	1	...	...	...	1	...	2
Rajputana	Ajmer-Merwara	1	...	...	1	...	...	...	1
	Total (Mica)	12	7	...	7	...	1	...	15
									SA
Punjab	Jhelum	..	...	...	...	...	...	...	...
	Mianwali	...	...	...	...	...	...	...	...
	Shahpur	...	...	...	...	...	...	...	...
	Total (Salt)	...	...	...	...	...	...	...	...

DIX II—*contd.*

No. 2—*contd.*

regulated by the Indian Mines Act, during the year 1938—*contd.*

ACCIDENTS.				SERIOUS ACCIDENTS.												
Death rate per 1,000 persons employed.				Number of separate serious accidents.	Number of persons seriously injured.							Serious injury rate per 1,000 persons employed.				
					Underground.		Open workings.		Surface.							
Underground.	Open workings.	Surface.	Underground, Open workings and Surface.		Males.	Females.	Males.	Females.	Males.	Females.	Total.	Underground.	Open workings.	Surface.	Underground, Open workings and Surface.
ORE															
0·67	...	...	0·37	84	76	...	...	...	7	1	84	51·28	...	6·37	30·69
CA															
0·45	...	...	0·26	5	5	...	...	...	...	...	5	2·26	...	...	1·32
0·43	1·76	...	0·58	14	14	...	...	...	1	...	15	1·21	...	0·34	0·86
...	...	...	...	1	...		1	...	...	..	1	...	14 92	...	11·36
...	2·21	...	0·52	...	...	...	.	...	...	...	...	...	...	...	...
0·53	...	0·47	0·33	5	5	...	...	...	2	...	7	2·63	...	0 94	1·15
...	2·84	...	1·62	...	.	...	...	...	...	...	...	...	...	...	...
0·42	1·00	0·16	0·50	25	24	...	1	...	3	...	28	1·43	0·14	0·48	0·93
LT															
...	...	...	...	6	5	...	...	...	1	...	6	7·47	...	2·93	5·81
...	...	...	...	1	1	...	.		...	...	1	10·53	...	...	6·17
...	...	...	...	2	2	...	..	...	...	...	2	14·18	...	...	10·05
...	...	...	...	9	8	...	...	...	1	...	9	8·84	...	2·15	6·46

APPEN

Table

Statement of fatal and serious accidents in and about Mines

Province.	District and Mineral field.	FATAL								
		Number of separate fatal accidents.	Number of deaths.							
			Under-ground.		Open workings.		Surface.		Total.	
			Males.	Females.	Males.	Females.	Males.	Females.		
										STO
Bengal	Birbhum	...	...	...	...	...	...	...	...	
Bihar	Santal Parganas	2	...	...	2	...	...	...	2	
	Singhbhum	...	...	...	...	...	...	...	...	
Bombay	Surat	...	...	...	...	...	...	...	...	
Madras	Chingleput	...	...	...	...	...	...	...	...	
	Total (Stone)	2	...	...	2	...	...	...	2	
										LIME
Bihar	Shahabad	4	...	...	2	...	2	...	4	
Central Provinces	Bilaspur	...	...	...	...	...	...	..	...	
	Jubbulpore	...	...	...	...	...	..	...	...	
Madras	Coimbatore	...	...	...	...	...	...	...	...	
Punjab	Attock	...	...	...	...	...	...	...	...	
	Total (Limestone)	4	...	...	2	..	2	...	4	

DIX II—*contd.*

No. 2—*contd.*

regulated by the Indian Mines Act, during the year 1938—*contd.*

ACCIDENTS.				SERIOUS ACCIDENTS.											
Death rate per 1,000 persons employed.				Number of separate serious accidents.	Number of persons seriously injured.							Serious injury rate per 1,000 persons employed.			
					Underground.		Open workings.		Surface.						
Underground.	Open workings.	Surface.	Underground, Open workings and Surface.		Males.	Females.	Males.	Females.	Males.	Females.	Total.	Underground.	Open workings.	Surface.	Underground, Open workings and Surface.
NE															
...	...	...	...	1	...	...	...	...	1	...	1	...	...	1·98	1·14
...	1·27	...	0·73	2	...	...	2	...	...	...	2	...	1·27	...	0·73
...	...	...	...	1	...	...	1	...	...	...	1	...	0·81	...	0·75
...	...	...	...	3	...	...	3	...	...	...	3	...	5·08	...	4·82
...	...	...	...	10	...	...	1	1	6	2	10	...	1·86	43·48	7·93
...	0·23	...	0·17	17	...	...	7	1	7	2	17	...	0·89	3·56	1·47
STONE															
..	0·79	3·11	1·26	5	...	...	1	...	4	...	5	...	0·39	0·22	1·58
...	...	...	...	1	...	...	...	...	1	...	1	...	...	6·06	1·38
...	...	...	...	7	...	...	5	1	1	...	7	...	1·23	3·97	1·37
...	...	...	...	3	...	...	3	...	...	...	3	...	6·68	...	6·64
...	...	...	...	2	...	...	2	...	...	...	2	...	4·81	...	4·81
...	0·22	1·81	0·39	18	...	...	11	1	6	...	18	...	1·31	5·42	1·75

APPEN

Table

Statement of fatal and serious accidents in and about Mines

Province.	District and Mineral field.	FATAL							
		Number of separate fatal accidents.	Number of deaths.						
			Under-ground.		Open workings.		Surface.		Total.
			Males.	Females.	Males.	Females.	Males.	Females.	
									MAG
Madras	Salem	...	...	...	...	...	...	...	....
									CHINA
Delhi	Delhi	1	2	...	...	...	...	...	2
									FIRE
Central Provinces . .	Jubbulpore . . .	...	...	...	...	...	...	...	...
	Grand Total (All minerals).	248	233	...	21	3	22	4	283

DIX II—*contd.*

No. 2—*concld.*

regulated by the Indian Mines Act, during the year 1938—*concld.*

ACCIDENTS.				SERIOUS ACCIDENTS.											
Death rate per 1,000 persons employed.				Number of separate serious accidents.	Number of persons seriously injured.							Serious injury rate per 1,000 persons employed.			
					Underground.		Open workings.		Surface.						
Underground.	Open workings.	Surface.	Underground, Open workings and Surface.		Males.	Females.	Males.	Females.	Males.	Females.	Total.	Underground.	Open workings.	Surface.	Underground, Open workings and Surface.
NESITE															
...	...	...	...	1	...	...	1	...	...	...	1	...	0·65	...	0·64
CLAY															
32·26	...	...	26·67	...	...	...	...	...	...	...	...	...	...	...	...
CLAY															
...	...	...	...	1	...	...	...	...	1	...	1	...	...	2 ·57	2·55
1·66	0·29	0·32	0·92	1,165	898	...	55	21	192	30	1,196	6·38	0·91	2·70	3·91

APPENDIX II—*concld.*

Table No. 3.

Statement of fatal accidents in Mines regulated by the Indian Mines Act, during the year 1938, classified according to cause of accident.

Mineral worked.	Number of separate accidents.	Number of persons killed.											Death rate per 1,000 persons employed.			
		Explosions and ignitions of fire-damp and coal dust.	Falls of roof.	Falls of sides.	In shafts.	Suffocation by gases.	By explosives.	By Irruptions of water.	Haulage.	Miscellaneous underground.	Electricity.	Surface.	Total accidents.	Underground.	Open workings.	Surface.	Underground, Open workings and Surface.
Coal . .	217	...	102	49	11	...	5	2	39	22	...	13	248	1·85	0·32	0·32	1·23
Iron Ore . .	4	...	...	...	...	...	...	...	1	1	...	2	4	...	0·27	0·89	0·42
Manganese Ore	6	...	...	1	...	...	2	...	...	2	...	1	6	1·04	0·15	0·20	0·19
Chromite Ore .	1	...	...	1	...	...	...	...	...	...	...	...	1	...	1·04	...	0·87
Copper Ore .	1	...	1	...	...	...	...	...	...	...	...	...	1	0·67	...	...	0·37
Mica . .	12	...	1	6	4	...	3	...	...	...	...	1	15	0·42	1·00	0·16	0·50
Stone . .	2	...	...	2	...	...	...	...	...	...	...	...	2	...	0·23	...	0·17
Limestone .	4	...	...	1	...	...	...	...	...	1	...	2	4	...	0·22	1·81	0·39
China Clay .	1	...	...	2	...	...	...	...	...	...	...	...	2	32·26	...	...	6·67
Total for 1938	248	...	104	62	15	...	10	2	40	26	...	24	283	1·66	0·29	0·32	0·92
Total for preceding year.	208	2	78	70	12	2	15	...	33	22	2	12	248	1·62	0·48	0·19	0·93
Difference .	+40	—2	+26	—8	+3	—2	—5	+2	+7	+4	—2	+12	+35	+0·04	—0·19	+0·13	—0·01

APPENDIX III.

Statement of prosecutions under the Indian Mines Act, during the year 1938.

Province.	District.	Number of prosecutions.	Number of persons prosecuted.	Number of persons convicted.	Number of Regulations, Bye-laws and Rules and Sections of the Act contravened.	Remarks.
Bengal	Burdwan .	1	2	2	Section 22-C(1) of the Indian Mines Act, 1923 and Regulation 149 of the Indian Coal Mines Regulations, 1926 and Bye-law 95 made under Section 32 of the Indian Mines Act, 1923.	
	Do. . .	1	1	...	Regulation 146 of the Indian Coal Mines Regulations, 1926.	Accused could not be traced.
	Do. . .	2	6	...	Regulations 39 and 40 of the Indian Coal Mines Regulations, 1926.	Four of the accused were acquitted and the other two could not be traced.
	Do. . .	1	2	1	Regulation 69 (2) of the Indian Coal Mines Regulations, 1926.	One of the accused died.
Bihar	Hazaribagh . .	2	4	3	Section 22-C(1) of the Indian Mines Act, 1923, read with Rule 9 of the Rules made by the Bihar Government under Section 30 of the Indian Mines Act, 1923, and Regulation 16 of the Indian Metalliferous Mines Regulations, 1926.	One of the accused was acquitted.
	Do. . .	1	2	...	Regulations 38 and 40 of the Indian Metalliferous Mines Regulations, 1926.	The case was dropped as the accused could not be traced.
	Do. . .	1	1	1	Regulation 3 (1) of the Indian Metalliferous Mines Regulations, 1926.	
	Manbhum . .	1	2	2	Rule 9 of the Rules made by the Bihar Government under Section 30 of the Indian Mines Act, 1923 and Regulations 15 and 139 of the Indian Coal Mines Regulations, 1926.	

APPENDIX III—*contd.*

Statement of Prosecutions under the Indian Mines Act, during the year 1938—*contd.*

Province.	District.	Number of prosecutions.	Number of persons prosecuted.	Number of persons convicted.	Number of Regulations, Bye-laws and Rules and Sections of the Act contravened.	Remarks.
Bihar—*contd.*	Manbhum . .	1	1	1	Regulations 9, 137 and 139 of the Indian Coal Mines Regulations, 1926.	
	Do. . .	1	3	3	Rules 9, 8 and 15 of the rules made by the Bihar Government under Section 30 of the Indian Mines Act, 1923.	
	Do. . .	1	2	2	Section 29 (*j*) of the Indian Mines Act, 1923, read with Notification No. 1005, dated the 17th June 1937, issued by the Government of India, Department of Industries and Labour and Press *Communiqué*. dated the 10th September 1937.	
	Do. . .	1	2	1	Rule 17 of the rules made by the Bihar Government under Section 30 of the Indian Mines Act, 1923 and Regulations 58 (1), 92, 137 and 88 of the Indian Coal Mines Regulations, 1926.	One of the accused was acquitted.
	Do. . .	1	2	2	Rule 9-A of the rules made by the Bihar Government under Section 30 of the Indian Mines Act, 1923 and Regulations 71 (3) and 149 of the Indian Coal Mines Regulations, 1926.	
	Do. . .	1	1	1	Section 35 (*c*) of the Indian Mines Act, 1923.	
	Do. . .	1	3	2	Regulations 15 (4) and 70 (2) of the Indian Coal Mines Regulations, 1926, read with Regulations 137 and 149 of the Indian Coal Mines Regulations, 1926 and Rule 9-A of the Rules made by the Bihar Goverment	The case against one of the accused was withdrawn.

APPENDIX III—*contd.*

Statement of Prosecutions under the Indian Mines Act, during the year 1938—*contd.*

Province.	District.	Number of prosecutions.	Number of persons prosecuted.	Number of persons convicted.	Number of Regulations, Bye-laws and Rules and Sections of the Act contravened.	Remarks.
	Manbhum—*contd.*				under Section 30 of the Mines Act, 1923 read with Section 28(4) of the Indian Mines Act, 1923.	
	Do. .	1	1	...	Regulation 3 (2) of the Indian Coal Mines Regulations, 1926.	The case was withdrawn as the accused could not be traced.
	Do. .	1	4	3	Regulations 82 and 84 of the Indian Coal Mines Regulations, 1926.	One of the accused could not be traced.
	Do, . .	1	1	...	Regulations 82 and 148 of the Indian Coal Mines Regulations, 1926.	The accused could not be traced.
	Do. . .	1	2	2	Section 35 (c) of the Indian Mines Act, 1923 read with Section 109 of the Indian Penal Code.	
Bihar—*contd.*	Do. . .	1	8	...	Regulations nd 147 of the Indian Coal Mines Regulations 1926 and Bye-law 8 of the Bye-laws made under Section 32 of the Indian Mines Act, 1923.	The case is still pending.
	Do. . .	1	1	1	Bye-law 14 of the Bye-laws made under Section 32 of the Indian Mines Act, 1923, and Regulation 146 of the Indian Coal Mines Regulations, 1926.	
	Do. . .	1	5	5	Regulations 77 and 81 (1) (c) of the Indian Coal Mines Regulations, 1926.	
	Do. . .	1	2	2	Rules 12 and 15 of the Rules made by the Bihar Government under Section 30 of the Indian Mines Act, 1923.	
	Do. . .	1	1	1	Section 35 (c) of the Indian Mines Act, 1923.	

APPENDIX III—*concld.*

Statement of Prosecutions under the Indian Mines Act, during the year 1938—*concld.*

Province.	District.	Number of prosecutions.	Number of persons prosecuted.	Number of persons convicted.	Number of Regulations, Bye-laws and Rules and Sections of the Act contravened.	Remarks.
Bihar—*concld.*	Manbhum	1	2	...	Regulations 37, 38, 42 and 47 of the Indian Coal Mines Regulations, 1926.	The case was withdrawn.
Central Provinces.	Chhindwara	1	2	1	Regulations 146 and 95 (1) of the Indian Coal Mines Regulations, 1926 and Bye-law 86 of the Bye-laws made under Section 32 of the Indian Mines Act, 1923.	The case against one of the accused was dropped.
	Do.	1	1	1	Regulations 101 and 106 of the Indian Coal Mines Regulations, 1926.	
	Do.	1	1	1	Regulation 95 (2) of the Indian Coal Mines Regulations 1926.	
	Do.	1	1	...	Regulations 143 and 146 of the Indian Coal Mines Regulations, 1926 and 304 A of the Indian Penal Code.	The case is still pending.
	Do.	1	1	1	Regulations 101 and 146 of the Indian Coal Mines Regulations, 1926.	
	Do.	1	1	1	Regulations 143 and 146 of the Indian Coal Mines Regulations, 1926.	
	Do.	1	1	1	Regulation 106 of the Indian Coal Mines Regulations, 1926.	
	Do.	2	4	4	Regulation 95 of the Indian Coal Mines Regulations, 1926.	
	Jubbulpore	1	1	1	Regulation 3 (1) of the Indian Metalliferous Mines Regulations, 1926.	
		37	74	46		

APPENDIX IV.

Miscellaneous.

Statement No. 1.

LIST OF INSPECTION CIRCLE.

No. 1 Circle.	No. 2 Circle.
1. All mines in Baluchistan.	1. All mines in Assam.
2. All mines in Bihar except mines in the District of the Santhal Parganas and such mines in the District of Manbhum as lie east of a line drawn from mile 175 on the Bengal Nagpur Railway to mile 169 on the Grand Trunk Road and continued in a straight line across the District.	2. All mines in Bengal.
3. All mines in Orissa.	3. Such mines in Bihar as lie in the District of the Santhal Parganas and in the District of Manbhum east of a line drawn from mile 175 on the Bengal Nagpur Railway to mile 169 on the Grand Trunk Road and continued in a straight line across the District.
4. All mines in the North-West Frontier Province.	4. All mines in Bombay.
5. All mines in the Punjab.	5. All mines in the Central Provinces.
6. All mines in Rajputana.	6. All mines in Madras.
7. All mines in the United Provinces.	

Statement No. 2.

Names of persons to whom first and second class coal mine managers' certificates of competency and surveyors' certificates of competency were granted during the year 1938.

Certificates granted to holders of British certificates of competency.

(*a*) FIRST CLASS.

Name.	Number of Indian certificate.	Date of Indian certificate.	Number of British certificate.	Date of British certificate.
Carty, John Edward Winters .	393	5th January, 1938.	2232	2nd August, 1928.
Watson, Alex Alexander Baird .	394	Ditto.	1312	3rd February, 1923.
Young, Andrew	395	26th April, 1938 .	1264	Ditto.
Legg, Robert John . . .	396	Ditto.	2988	30th July, 1937.
Arnold, Raoul Robarts . .	397	Ditto.	2780	26th January, 1934.
Butler, William	398	9th November, 1938	3031	18th February, 1938.

APPENDIX IV—*contd.*

Miscellaneous—*contd.*

Statement No. 2—*contd.*

Names of persons to whom first and second class coal mine managers' certificates of competency and surveyors' certificates of competency were granted during the year 1938—*contd.*

Certificate granted to holders of British certificates of competency—contd.

(*a*) FIRST CLASS—*contd.*

Name.	Number of Indian certificate.	Date of Indian certificate.	Number of British certificate	Date of British Certificate.
Coutts, Alexander Erskine . .	399	9th November, 1938	2920	30th July, 1936.
Hogg, George William . .	400	Ditto.	2842	8th February, 1935.
Mukherjee, Smashaneswar . .	401	Ditto.	3044	18th February, 1938.
Barrowman, Hamilton Campbell .	402	Ditto.	3030	Ditto.
Wightman, David Hyslop . .	403	Ditto.	2246	2nd August, 1928.
Bose, Mihir Kumar .	404	Ditto.	3013	18th February, 1938.
Wilson, Herbert Gladstone . .	405	Ditto.	2588	24th July, 1931.

INDIAN CERTIFICATES.

(*a*) FIRST CLASS.

Name.	Number of certificate.	Date of certificate.	Remarks.
Pai, Baggarbet Ramchandra . . .	262	26th April, 1938 .	
Roy, Shakti Pada	263	Ditto.	
Dickinson, Reginald William . . .	264	Ditto.	
Dey, Kishori Ballav	265	Ditto.	
Roy, Suresh Chandra	266	Ditto.	
Bullock, William James	267	Ditto.	

APPENDIX IV—*contd.*

Miscellaneous—*contd.*

Statement No. 2—*concld.*

Names of persons to whom first and second class coal mine managers' certificates of competency and surveyors' certificates of competency were granted during the year 1938—*contd.*

INDIAN CERTIFICATES—*contd.*

(*b*) SECOND CLASS.

Name.	Number of Certificate.	Date of Certificate.	Remarks.
Guise, Paul Elmore Colin	552	26th April, 1938.	
Garge, Daya Parkash	553	Ditto.	
Jain, Indra Sain	554	Ditto.	
Srinivasan, V.	555	Ditto.	
Krishnan, M. S	556	Ditto.	
Hussain, Syed Hammad	557	Ditto.	
Mukherjee, Bhudhar Chandra	558	Ditto.	
Sen, Nalini Ranjan	559	Ditto.	
Mukherjee, Shyama Pada	560	Ditto.	
Sarkar, Radha Raman	561	Ditto.	
Ghatak, Bebati Mohan	562	Ditto.	

Certificates granted to holders of British certificates of competency.

(*c*) SURVEYORS' CERTIFICATES.

Name.	Number of British certificate.	Date of British certificate.	Number of Indian certificate.	Date of Indian certificate.
Beard, Arthur Andrew	589	12th February, 1921	5	11th November, 1938.
Wilson, Herbert Gladstone	743	8th August, 1924	6	Ditto.

INDIAN CERTIFICATES.

Name.	No of certificate.	Date of certificate	Remarks.
Sabhlok, Shiv Ram	100	10th January, 1939.	
Krishnaswamy, S.	101	Ditto.	
Marwaha, Babu Ram	102	Ditto.	
Singh, Iqbal	103	Ditto.	
Batra, Washisht Nath	104	Ditto.	
Chatterjee, Dharma Das	105	Ditto.	
Ramnatham, S. N.	106	Ditto.	
De, Bhagabati Charan	107	Ditto.	
Ganguly, Kala Chand	108	Ditto.	

APPENDIX IV—*contd.*

Miscellaneous—*contd.*

Statement No. 3.

NOTIFICATION.

New Delhi, the 20th January 1938.

No. M.-1051.—In exercise of the powers conferred by section 46 of the Indian Mines Act, 1923 (IV of 1923), and in supersession of the notification of the Government of India in the late Department of Industries and Labour No. M.-1051, dated the 1st October 1935, the Central Government is pleased to exempt the mines, groups of mines, classes of mines, parts of mines, and classes of persons specified in the first column of the annexed Schedule from the operation of those provisions of the said Act, which are specified in the corresponding entry in the second column thereof, subject to the conditions, if any, specified in the corresponding entry in the third column thereof.

SCHEDULE.

1 Mines and classes exempted.	2 Provisions from which exemption is granted.	3 Conditions attached to exemption.
1. Mines of *kankar murum*, laterite, gravel, sand, clay (not including kaolin, china clay or white clay), fire-clay, ochre, stone, earth, fuller's earth, barytes, bauxite, slate and lime-stone: Provided that this exemption shall not apply to— (*a*) The mines specified in Appendix I to this Schedule. (*b*) Slate mines in the Province of the Punjab and in the Monghyr district of the Province of Bihar. (*c*) Limestone mines in the districts of Shahabad and Jubbulpore. (*d*) Mines of soapstone or steatite (*e*) Stone mines in the Town and Island of Bombay.	All . . .	(1) The owner, agent or manager of every mine so exempted, whether existing or new, shall forward to the Chief Inspector and the District Magistrate a report in the form contained in Appendix II to this Schedule as soon as— (i) the depth of the mine measured from its highest to its lowest point reaches 20 feet; or (ii) the number of persons employed in the mine on any day is more than 50; and at such times thereafter as the District Magistrate may direct. (2) The owner, agent and manager shall permit the Chief Inspector or any person exercising the powers of an Inspector or a person duly authorised in writing in this behalf by a person exercising the powers of an Inspector to enter, inspect and examine any mine so exempted at any reasonable time. (3) The owner, agent or manager of any mine so exempted shall not permit any female to enter for purposes of employment, or be employed in the underground workings, if any, of the mine.

APPENDIX IV—*contd.*

Miscellaneous—*contd.*

Statement No. 3—*contd.*

SCHEDULE—*contd.*

1 Mines and classes exempted.	2 Provisions from which exemption is granted.	3 Conditions attached to exemption.
2. Borings and oil wells in the making or operation of which no person is employed beneath the superjacent ground.	All.	
3. Mines or parts of mines in which excavation is being carried out for prospecting purposes only and not for the purpose of obtaining minerals for use or sale: Provided that— (i) not more than 20 persons are employed in or about such excavation; (ii) no part of the excavation extends beneath the superjacent ground; and (iii) the depth of the excavation measured from its highest to its lowest point nowhere exceeds 20 feet or, in the case of an excavation for coal, 50 feet.	All.	
4. Iron-ore mines worked without mechanical power, the whole of the ore from which is supplied locally to village smelters and blacksmiths.	All . . .	The owner, agent or manager of any mine so exempted shall not permit any female to enter for purposes of employment, or be employed in, the underground workings, if any, of the mine.
5. The following mines in the Province of Bihar, namely:—		
(i) The coke factory of the Burrakur Coal Company, Ltd., at Loyabad in the Manbhum district.	All.	
(ii) The coke factory of the Barari Coke Company, Ltd., at Kendwadih in the Manbhum district.	All.	
(iii) The coke factory of the Eastern Coal Company, Ltd., at Bhowra in the Manbhum district.	All.	
(iv) The coke factory of the Lodna Colliery Company, Ltd., at Lodna in the Manbhum district.	All.	

APPENDIX IV—*contd.*

Miscellaneous—*contd.*

Statement No. 3—*contd.*

SCHEDULE—*contd.*

1 Mines and classes exempted.	2 Provisions from which exemption is granted.	3 Conditions attached to exemption.
5.—*contd.*		
(v) The coke factory of the East Indian Railway at Giridih in the Hazaribagh district.	All.	
(vi) Open excavations for coal in the Rajmahal coalfields in the district of the Sonthal Parganas, provided that not more than 20 persons are employed in or about the mine at any one time.	All.	
6. The following mines in the Province of Bombay, namely :—		
Stone crushing plants forming part of the mines included in Appendix I or situated in the Town and Island of Bombay.	All.	
7. The following mines in the Province of Madras, namely :—		
Stone mines in the Mangalgiri sub-division of the Guntur district specified in Appendix I.	The provisions contained in section 28.	The owner, agent or manager of any mine so exempted shall not permit any female to enter for purposes of employment, or be employed in, the underground workings, if any, of the mine.
8. The following mines in the North-West Frontier Province, namely :—		
(i) Salt mines in the Kohat district.	All.	
(ii) Carbonaceous clay pits in the Hazara district.	All.	
9. Persons employed in the loading of wagons, tubs or carts on the surface and cartmen on the surface.	The provisions contained in sections 23-B and 28(3).	
10. Firemen, winding enginemen, pumpmen and horsekeepers.	The provisions of section 22-A.	
11. Winding enginemen, Engine and power-house attendants, Banksmen, Boiler Firemen, Trolleymen and Trammers. Persons working on mechanical screening and loading plants; and Fan Attendants.	The provisions contained in sections 22-B(2) and 28(2).	(1) The period of work of these workers shall not exceed eight hours in any one day. (2) The entries in the register prescribed by section 28(1) shall be such that workers working in accordance therewith are not working in contravention of any of the provisions of Chapter VI of the Act other than those from which exemption is given, or in contravention of condition (1).

APPENDIX IV—*contd.*

Miscellaneous—*contd.*

Statement No. 3—*contd.*

SCHEDULE—*contd.*

APPENDIX I.

[See *Clause* (a) *of proviso to entry 1 in first column of Schedule.*]

No.	Name of mine.	Name of owner.	Situation.		
			Village.	Sub-division.	District.
		BENGAL.			
		STONE MINES.			
1	Maharaja's stone .	Maharaja of Kassimbazar	Bahadurpur . Chandannagar. Lakshmanpur.	Rampurhat	Birbhum.
2	Gopalpur . .	S. G. Bose . . .	Rajgaon .	Do.	Do.
		CLAY MINES.			
1	Gopinathpur . .	Nirode Baran Roy .	Durgapur .	Asansol .	Burdwan.
2	Ranigunj No. 1 .	Burn and Company Ltd.	Ronai . .	Do. .	Do.
3	Ranigunj No. 2 .	Do. . .	Baktarnagar .	Do. .	Do.
4	Ranigunj No. 3 .	Do. . .	Ronai . .	Do. .	Do.
		FIRECLAY MINES.			
1	Churulia . .	The Churulia Coal Co., Ltd.	Churulia .	Asansol .	Burdwan.
2	Danapahari . .	Danapahari Fireclay Concern.	Bonjamuri .	Do. .	Do.
3	Dendua . . .	D. N. Chowdhury . .	Dendua .	Do. .	Do.
4	Dabor . . .	Do. . .	Dabor . .	Do. .	Do.
5	Sabanpur . .	Burn and Company, Ltd.	Sabanpur .	Do. .	Do.
6	Sangramgarh . .	Kalyanji Lalji . .	Sangramgarh .	Do. .	Do.
7	Rangakanali . .	Someswar Ojha . .	Rangakanali .	Do. .	Do.
8	Lalbazar . .	Mandal, Khandait and Company.	Lalbazar .	Do. .	Do.
9	Pahargora . .	Do. . . .	Pahargora .	Do. .	Do.
10	Digari . . .	Burn and Company, Limited.	Digari . .	Do. .	Do.
11	Bhadulia . .	D. N. Roy and Others .	Bhadulia .	Suri . .	Birbhum.
12	Rassa . . .	Do. . .	..	Do. .	Do.
13	Barhra . . .	Do. . .	Barhra . .	Do. .	Do.

APPENDIX IV—*contd.*

Miscellaneous—*contd.*

Statement No. 3—*contd.*

SCHEDULE—*contd.*

APPENDIX I—*contd.*

[See *Clause* (a) *of proviso to entry 1 in first column of Schedule*—contd.]

No.	Name of mine.	Name of owner.	Situation.		
			Village.	Sub-division.	District.
		BIHAR.			
		STONE MINES.			
1	Kendadih . .	Tata Iron and Steel Company, Limited.	Galudih .	..	Singhbhum.
2	Bhairabpur Quarry No. 2.	A. N. Mukherjee . .	Bhairabpur .	Jamshedpur	Do.
3	Bhairabpur . .	L. Hartley and Company	Narsinghar .	Do. .	Do.
4	Pawrah Narsingarh .	K. B. Dass . . .	Do. .	Do. .	Do.
5	Dhaodandh . .	Government of Bihar, P. W. Department (Irrigation Branch).	Dhaodandh .	Sasaram .	Shahabad.
6	Barhaibagh . .	East Indian Railway .	Barhaibagh .	Do. .	Do.
7	Tarachandi . .	Seth Iswar Das . .	Tarachandi (Sikaria).	Do. .	Do.
8	Ramsilla . .	G. W. Powell and A. Ghani.	Gaya . .	Gaya .	Gaya.
9	Araji-khaprajola and Kolhajora.	Seth Lilaram . .	Araji-khaprajola and Kolhajora.	Pakur .	Sonthal Parganas.
10	Baghajuli and Manjurcola.	J. N. Banerjee and Company.	Baghajuli .	Do. .	Do.
11	Baghajuli . .	Eastern Stone Company.	Baghajuli .	Do. .	Do.
12	Baghajuli . .	K. D. Gupta . . .	Do. .	Do. .	Do.
13	Baghajuli and Ghorapahari.	H. K. Mukherjee . .	Baghajuli and Ghorapahari.	Do. .	Do.
14	Baghajuli . .	Pakurjam Stone Company	Baghajuli .	Do. .	Do.
15	Baghajuli and Manjurcola.	Raghubir Prasad and Bros.	Baghajuli and Manjurcola.	Do. .	Do..
16	Baghajuli . .	Maharaja of Kassimbazar Stone Works.	Baghajuli .	Do. .	Do..
17	Baghajuli . .	A. Sarkar & Co. . .	Do. .	Do. .	Do.
18	Ghorapahari . .	All India Stone Company	Ghorapahari .	Do. .	Do.
19	Ghorapahari . .	Pakur Stone Supply Co. .	Do. .	Do. .	Do.
20	Ghorapahari . .	Cunliffe & Martin . .	Do.	Do. .	Do.

APPENDIX IV—*contd.*

Miscellaneous—*contd.*

Statement No. 3—*contd.*

SCHEDULE—*contd.*

APPENDIX I—*contd.*

[See *Clause (a) of proviso to entry 1 in first column of Schedule*—contd.]

No.	Name of mine.	Name of owner.	Situation.		
			Village.	Sub-division.	District.
		BIHAR—*contd.*			
		STONE MINES—*contd.*			
21	Baghajuli . .	Laljiram Raghunandan Prasad.	Ghorapahari .	Pakur .	Santhal Parganas.
22	Ghorapahari . .	Pakur Stone Co. . .	Do. .	Do. .	Do.
23	Ghorapahari . .	Pakurjam Stone Co. .	Do. .	Do. .	Do.
24	Ghorapahari . .	Raghubir Prasad & Bros.	Do. .	Do.	Do.
25	Ghorapahari . .	Seth Teomall . .	Do. .	Do. .	Do.
26	Jharnatola . .	H. K. Mukherjee . .	Jharnatola .	Do. .	Do.
27	Kolajora . .	Do. . .	Kolajora .	Do. .	Do.
28	Mahulan . .	Kumar G. C. Pande .	Mahulan .	Do. .	Do.
29	Mahadebpur . .	H. K. Mukherjee . .	Mahadebpur .	Do. .	Do.
30	Malpahari . .	B. N. Pal and M. N. Dey	Malpahari .	Do. .	Do.
31	Malpahari . .	Behar Stone and Supply Company.	Do. .	Do. .	Do.
32	Malpahari . .	Gyanendra Nath Banerjee	Do. .	Do. .	Do.
33	Malpahari . .	B. B. Chatterjee & Sons .	Do. .	Do. .	Do.
34	Malpahari . .	Chatterjee Shaw & Co. .	Do. .	Do. .	Do.
35	Malpahari . .	K. C. Ghosh & Co. .	Do. .	Do. .	Do.
36	Malpahari . .	H. K. Mukherjee . .	Do. .	Do. .	Do.
37	Malpahari . .	Netram Sagarmall .	Do. .	Do. .	Do.
38	Malpahari . .	Pakur Stone Co. . .	Do. .	Do. .	Do.
39	Mungalpara . .	Do. . .	Mangalpara .	Do. .	Do.
40	Manjurcola . .	B. B. Chatterjee & Son .	Manjurcola .	Do. .	Do.
41	Manjurcola . .	Chatterjee Chakravarty .	Do. .	Do. .	Do.
42	Manjurcola . .	Netram Sagarmall . .	Do. .	Do. .	Do.
43	Baghajuli and Manjurcola.	Seth Khia Mall . .	Baghajuli Manjurola.	Do. .	Do.
44	Matiara . . .	Netram Sagarmall . .	Matiara .	Do. .	Do.
45	Murgadanga . .	Ramananda Raghunath Missir.	Murgadanga .	Do. .	Do.

APPENDIX IV—*contd.*

Miscellaneous—*contd.*

Statement No. 3—*contd.*

SCHEDULE—*contd.*

APPENDIX I—*contd.*

[See *Clause* (a) *of proviso to entry 1 in first column of Schedule*—contd.]

No.	Name of mine.	Name of owner.	Situation		
			Village.	Sub-division.	District.
		BIHAR—*contd.*			
		STONE MINES—*contd.*			
46	Pathrapara . .	H. K. Mukherjee . .	Pathrapara .	Pakur .	Sonthal Parganas.
47	Pipuljhuri . .	Pakur Stone Co. . .	Pipuljhuri .	Do. .	Do.
48	Pipuljhuri and Araji-khaprajola.	Kumar G. C. Pandey .	Pipuljhuri and Araji-khaprajola.	Do. .	Do.
49	Ranicola . .	H. K. Mukherjee . .	Ranicola .	Do. .	Do.
50	Sonajuri . .	H. K. Mukherjee . .	Sonajuri .	Do. .	Do.
51	Bankudih . .	Sha Muhammad Biswas .	Bakudih .	Rajmahal .	Do.
52	Bankudih Chota Bonapara.	Gurudeo Singh . .	Do. . .	Do. .	Do.
53	Bindubasini hill .	Calcutta Chord Railway Company.	Jhumarbaq .	Do. .	Do.
54	Bara Bonapara .	Unsettled . . .	..	..	..
55	Bogapahar . .	Birendra Nath Sha .	Bogapahar .	Rajmahal .	Sonthal Parganas.
56	Bornaphar . .	Unsettled . . .	..	..	..
57	Bara Betona . .	Birendra Nath Sha .	Bara Betona .	Rajmahal .	Sonthal Parganas.
58	Belbhadri . .	Unsettled . . .	..	..	..
59	Chalpahar Paktori Pahar.	E. B. Railway . .	Paktori Pahar.	Rajmahal .	Sonthal Parganas.
60	Chowki Pahar. .	A. S. Apcar . .	Chowki Pahar.	Do. .	Do.
61	Gadaitongi . .	Seth Sundar Prasad .	Gadaitongi .	Do. .	Do.
62	Gumapahar . .	Gurudeo Singh . .	Gumapahar .	Do. .	Do.
63	Gangu-para . .	Keshab Chandra Banerjee	Gangu-para .	Do. .	Do.
64	Madia	Harinath Das . .	Madia . .	Do. .	Do.
65	Maharajpur Harinkole.	T. S. Samanta . .	Dudhkole .	Do. .	Do.
66	Malitoke . .	E. B. Railway . .	Malitoke .	Do. .	Do.
67	Pathria Balapokhar.	J. N. Mukherjee . .	Pathria Balapokhar.	Do. .	Do.

APPENDIX IV—*contd.*

Miscellaneous—*contd.*

Statement No. 3—*contd.*

SCHEDULE—*contd.*

APPENDIX I—*contd.*

[See *Clause* (a) *of proviso to entry 1 in first column of Schedule—contd.*]

No.	Name of mine.	Name of owner.	Situation.		
			Village.	Sub-division.	District.
		BIHAR—*contd.*			
		STONE MINES—*contd.*			
68	Rangatola, Harinkole and Sarwapur.	K. K. Mukharji Brothers.	Rangatola Harinkole.	Rajmahal .	Sonthal Parganas.
69	Sahibganj Block No. I.	Birendra Nath Sha .	Motijharna .	Do. .	Do.
70	Sahibganj Block No. II.	J. N. Mukharji . .	Bhagiamari .	Do. .	Do.
71	Sahibganj Block No. III.	Sital Prasad Marwari .	Adro Bedo .	Do. .	Do.
72	Sahibganj Block No. IV.	Sital Prasad Marwari .	Golbandha .	Do. .	Do.
73	Sitapahar Patnibona.	Nanji Mowji . .	Sitapahar Patnibona.	Do.	Do.
74	Sitapahar Melitoke .	Sardar Kartar Singh .	Malitoke .	Do. .	Do.
75	Surjapahar (Malitoke).	Gurudeo Singh . .	Do. .	Do. .	Do.
76	Taljhari old laterite quarry.	Parmanand Marwari .	Khairboni .	Do. .	Do.
77	Saleempore . .	J. N. Mukherjee . .	Saleempore .	Bhagalpur .	Bhagalpur.
78	Manpur . .	G. W. Powell and A. Ghany.	Manpur .	Gaya .	Gaya.
79	Manpur . .	Maniruddin . . .	Do. . .	Do. .	Do.
80	Manpur . . .	Jogeswar Ram . .	Do . .	Do. .	Do.
81	Manpur . . .	Seth Isser Dass . .	Do. . .	Do. .	Do.
82	Manpur . . .	Azimuddin Basant Lal .	Do. . .	Do. .	Do.
83	Karjura . . .	Ramlal Basantlal .	Karjura .	Do. .	Do.
84	Pirpahar . .	Bengal and N. W. Railway	Sukhurpar .	Monghyr .	Monghyr.
85	Girhinda . .	Melaram and Basantlal	Girhinda	Do. .	Do.
86	Bodma . .	A. V. Sam . .	Bodma .	Jamtara .	Sonthal Parganas.
87	Tinpahar . .	Chatterjee, Shaw and Company.	Tinpahar .	Rajmahal .	Do.
88	Maharajpur (locally known as Sahibganj Block No. I).	Birendra Nath Shah .	Matijharna .	Do. .	Do.

APPENDIX IV—*contd.*

Miscellaneous—*contd.*

Statement No. 3—*contd.*

SCHEDULE—*contd.*

APPENDIX I—*contd.*

[See *Clause* (a) *of proviso to entry 1 in first column of Schedule*—contd.]

No.	Name of mine.	Name of owner.	Situation.		
			Village.	Sub-division.	District.
		BIHAR—*concld.*			
		STONE MINES—*concld.*			
89	Tinpahar	Seth Teomal	Tinpahar	Rajmahal	Sonthal Parganas.
90	Pirpahar	Rajshahi Stone and Coal Agency.	Dargadanga	Do.	Do.
91	Tinpahar	Do.	Tinpahar	..	Do.
92	Dhanghara	Shivanand Shivamay and Company.	..	Pakur	Do.
93	Durgapur	Do.	..	Do.	Do.
94	Ghorapahari	Seth Tewamal	Ghorapahari	Do.	Do.
		FIRECLAY MINES.			
1	Merrah	Bengal Coal Company, Limited.	Merrah	..	Manbhum.
2	Sangamohal	Bihar Firebricks and Potteries, Limited.	Sangamohal	Dhanbad	Do.
3	Chatabar	Do.	Chatabar	Do.	Do.
4	Rangamati	Burn and Company, Limited.	Rangamati	Do.	Do.
5	Gulfarbari	Do.	Gulfarbari	Do.	Do.
6	Mugma Birsingpur	D. N. Chowdhury	Mugma Birsingpur.	Do.	Do.
7	Kapasara	Amir Ahmed Khan	Kapasara	Do.	Do.
8	Palasia	Alladad Khan	Palasia	Do.	Do.
9	Jograd	Dina Nath Gorai	Jograd	Do.	Do.
10	Kethardih	Haripada Goswami	Ketherdih	Do.	Do.
11	Sulanga	D. N. Choudhury	Sulanga	Do.	Do.
		LIMESTONE MINE.			
1	Ray-Dundu	National Cement, Mines and Industries, Limited.	Ray-Dundu	Ranchi	Ranchi.

APPENDIX IV—*contd.*

Miscellaneous—*contd.*

Statement No. 3—*contd.*

SCHEDULE—*contd.*

APPENDIX I—*contd.*

[See *Clause* (a) *of proviso to entry 1 in first column of Schedule*—contd.]

No.	Name of mine.	Name of owner.	Situation.		
			Village.	Sub-division.	District.
		BOMBAY.			
		STONE MINES.			
1	Danda . . .	Government of Bombay, Revenue Department.	Danda . .	Bandra .	Bombay Suburban.
2	Sevalia . . .	B., B. and C. I. Railway	Sevalia .	Thusra .	Kaira.
3	Orwad . . .	Walji Bhimji . .	Orwad .	Bulsar .	Surat.
4	Khadki . . .	Arjun Mavji . .	Khadki .	Do. .	Do.
5	Motiwada . .	Jaganji Dayabhai Patel .	Motiwada .	Do. .	Do.
6	Ratlao . . .	B., B. and C. I. Railway	Ratlao . .	Do. .	Do.
7	Kachora . .	G. I. P. Railway . .	Kachora .	Kalyan .	Thana.
8	Anik . . .	Bombay Port Trust .	Anik and Mohul.	..	Bombay Suburban.
9	Virar . . .	B., B. and C. I. Railway	Virar . .	Bassein .	Thana.
10	Kandivli . .	Government of Bombay, Public Works Department.	Kandivli .	Salsette .	Bombay Suburban.
11	Kandivli . .	Government of Bombay, Revenue Department.	Do. .	Do. .	Do.
12	Malad . . .	Do. . . .	Malad . .	Do. .	Do.
13	Gilbert Hill (Andheri)	Government of Bombay .	Andheri .	Andheri .	Do.
14	Danda (No. 1) .	Do. . . .	Danda . .	Bandra .	Do.
15	Danda (No. 2) .	Do. . . .	Do. . .	Do. .	Do.
16	Sevalia . . .	Tribhubandas Harji .	Sevalia .	Thasra .	Kaira.
17	Dekor (Jaklarkhandi)	B., B. and C. I. Railway .	Ralchial Jakbad and Kalsear.	..	Do.
		BAUXITE MINE.			
1	Taiyabpur Bauxite mine.	Killick, Nixon and Co. .	Taiyabpur .	Kapadvanj Taluka.	Kaira.
		CENTRAL PROVINCES AND BERAR.			
		STONE MINES.			
1	Paras . . .	G. I. P. Railway . .	Paras . .	Balapur .	Akola (Berar).

APPENDIX IV—*contd.*

Miscellaneous—*contd.*

Statement No. 3—*contd.*

SCHEDULE—*contd.*

APPENDIX I—*contd.*

[See *Clause* (a) *of proviso to entry 1 in first column of Schedule*—contd.]

No.	Name of mine.	Name of owner.	Situation.		
			Village.	Sub-division.	District.
		CENTRAL PROVINCES AND BERAR—*contd.*			
		STONE MINES—*contd.*			
2	Katepurna . .	G. I. P. Railway .	Katepurna .	Murtizapur	Akola (Berar).
3	Wai . . .	Do. . . .	Wai . .	Chandur .	Amraoti.
4	Konda Nalla . .	Rajawasta, Contractor .	Konda . .	Bhandak .	Chanda.
5	Borkhedi . .	Do.	Borkhedi .	..	Nagpur.
		LIMESTONE MINES.			
1	Baraduar . .	Tata Iron & Steel Co., Ltd.	Dumarpara .	..	Bilaspur.
2	Paraghat . .	Jairam Valjee . .	Parsoda & Khaira.	..	Do.
		OCHRE MINES.			
1	Bhiwkhund . .	Hashambhoy & Sons .	Bhiwkhund .	..	Chanda.
2	Haveli Range . .	Abdul Hussainmulla Hasanally.	Haveli Range Forest.	..	Do.
		FULLER'S EARTH MINE.			
1	Tikuria	G. H. Cook & Sons .	Tikuria .	..	Jubbulpur.
		FIRECLAY MINES.			
1	Hardua . . .	Burn & Co., Limited .	Hardua .	Katni .	Jubbulpur.
2	Pit No. 1 . .	Do. . . .	Shoiteria .	Do. .	Do.
3	Hardua . . .	Lately owned by Kalyanji Govindji.	Hardua .	Do. .	Do.
4	Polipathar . .	Perfect Pottery Co., Limited.	Polipathar .	..	Do.
		BAUXITE MINES.			
1	Tikuri . . .	K. P. Pandey . .	Tikuri . .	Murwara .	Jubbulpur.
2	Tikuri . . .	C. L. Pathak and Sons .	Do. . .	Do. .	Do.
3	Tikuri . . .	K. P. Pande . . .	Do. . .	Jubbulpur .	Do.

APPENDIX IV—*contd.*

Miscellaneous—*contd.*

Statement No. 3—*contd.*

SCHEDULE—*contd.*

APPENDIX I—*contd.*

[See *Clause* (a) *of proviso to entry 1 in first column of Schedule*—contd.]

No.	Name of mine.	Name of owner.	Situation.		
			Village.	Sub-division.	District.
		DELHI.			
		STONE MINE.			
1	Mochibagh . .	Lala Sedhu Mall . .	Mochibagh .	Delhi .	Delhi.
		MADRAS.			
		STONE MINES.			
1	Pallavaram . .	Madras Corporation .	Pallavaram .	Saidapet Tq.	Chingleput.
2	Pallavaram No. 3 .	Cantonment Authority .	St. Thomas' Mount and Pallavaram.	Do. .	Do.
3	Pallavaram . .	Mahdi Hussain Khan .	Pallavaram .	Do. .	Do.
4	Trisulam . .	Madras Port Trust .	Trisulam .	Do. .	Do.
5	Thattankunnu-Meonambakam.	Garrison Engineer, Military Deparment, Fort St. George, Madras.	Do. .	Do. .	Do.
6	Agraharam (S. No. 11).	Dorbalapeda Venkata Sastry.	Kolankonda .	Mangalgiri .	Guntur.
7	Kolankonda (S. No. 12).	M. & S. M. Railway .	Do. .	Do. .	Do.
8	Kolankonda . .	Public Works Department, Krishna Western Division Bezwada.	Do. .	Do. .	Do.
9	Kolankonda . .	District Board, Guntur .	Do. .	Do. .	Do.
10	Tadepalli . .	Do. . . .	Tadepalli .	Do. .	Do.
11	Tadepalli and Sitanagaram.	Public Works Department, Krishna Western Division, Bezwada.	Tadepalli and Sitanagaram.	Do. .	Do.
12	Sitanagaram (S. No. 344/6).	Public Works Department, Krishna Western Division, Bezwada.	Sitanagaram .	Do. .	Do.
13	Tadepalli. . .	Lately owned by Municipal Council, Tenali.	Tadepalli .	Do. .	Do.
14	Katheru . .	A. Lakshamanaswamy Naidu and Others.	Katheru .	Rajmundry	East Godavari.
15	Molagupparai . .	Military Department .	Trichinopoly Town.	Trichinopoly	Trichinopoly.

APPENDIX IV—*contd.*

Miscellaneous—*contd.*

Statement No. 3—*contd.*

SCHEDULE—*contd.*

APPENDIX I—*contd.*

[See *Clause* (a) *of proviso to entry 1 in first column of Schedule*—contd.]

No.	Name of mine	Name of owner.	Situation.		
			Village.	Sub-division.	District.
		MADRAS—*contd.*			
		STONE MINES—*contd.*			
16	Sanipparai . .	South Indian Railway .	Edamalapet .	Trichinopoly	Trichinopoly.
17	Mogalrajpuram .	Government of Madras, Public Works Department.	Mogalrajpuram	Bezwada Taluk.	Kistna.
18	Pakkam . .	South Indian Railway .	Pakkam .	Madurantakam Taluk	Chingleput.
19	Stone quarry . .	Do. . . .	Paranur, No. 209 of Tirrukkoyilur.	..	Arcot.
20	Kodambar quarry .	Do. . . .	At Mile T. 380 on the Madura-Tuticorin Line on a separate siding.	..	Tinnevelly.
21	Veli quarry . .	Do. . . .	Between miles Q508/10 and Q509/1.	..	Do.
22	Mile Q460/16-17, Q461/0-2, and Q461/16-19.	Do. . . .	Between Katharkara and Ezhukone Stations (Sheneothah—Quilon Section).	..	Do.
		BARYTES MINES.			
1	Block Nos. 21 and 21/A.	B. P. Seshareddy . .	Kommemari .	Dhone .	Kurnool.
2	Betamcherla R. F. .	Do. . .	Kolumalappali	Do. .	Do.
3	Vemula (S. Nos. 981-5-978 and 979).	A. Krishnappa and Sons.	Vemula .	Pulivendla Taluk.	Cuddapah.
4	Nandipalli . .	Do. . .	Kothapalli (S. Nos. 517/2 and 517/3).	Do. .	Do.
5	Vemula (S. No. 981-4).	Tiffin and Company .	Vemula .	Do. .	Do.
6	Vemula S. No. 1021	Do. . .	Do. .	Do. .	Do.
7	Kothapalli, S. No. 288.	Do. . .	Kothapalli .	Do. .	Do.

APPENDIX IV—*contd.*

Miscellaneous—*contd.*

Statement No. 3—*contd.*

SCHEDULE—*contd.*

APPENDIX I—*contd.*

[See *Clause* (a) *of proviso to entry 1 in first column of Schedule*—contd.]

No.	Name of mine.	Name of owner.	Situation.		
			Village.	Sub-division.	District.
		MADRAS—*concld.*			
		LIMESTONE MINE.			
1	Madukkarai . .	Coimbatore Cement Company, Limited.	Madukkarai .	Coimbatore.	Coimbatore.
		SLATE MINE.			
1	Mine east of Nallayani.	Sirasnagandla Subbarayudu and others.	Within the limits of Kethagudipi Agrahan.	Podili Taluk.	Nellore.
		PUNJAB.			
		STONE MINES.			
1	Taxila . . .	Hukum Chand . .	Taxila . .	..	Rawalpindi.
2	Taxila . . .	Civil Department c/o Deputy Commissioner, Rawalpindi.	Do. . .	..	Do.
3	Sangla Hill . .	Government of the Punjab, Public Works Department (Irrigation Department.)	Sangla Hill .	..	Sheikhupura.
4	Sangla Hill . .	N. W. Railway . .	Do. . .	..	Do.
5	Chambal and Chanuwala.	P. W. Department (Irrigation Department).	Chambal and Chanuwala.	Pind Dadan Khan.	Jhelum.
6	Gharibwal (Jutana-quarry).	North Western Railway.	Jutana .	Do.	Do.
7	Chiniot . . .	N. W. Railway . .	Chiniot .	Jhang .	Jhang.
		LIMESTONE MINES.			
1	Wah . . .	Punjab Portland Cement Ltd.	Wah . .	Attock .	Attock.
2	Usmankhattar .	Krishna Lall Malhotra .	Usmankhattar.	Rawalpindi.	Rawalpindi.
3	Sangjani . .	Sangjani Stone Co., Ltd.	Sangjani .	Do.	Do.
4	Tarki . . .	Government of the Punjab, Public Works Department, Buildings and Roads Branch.	Tarki . .	Jhelum .	Jhelum.
5	Paikhel . . .	N. W. Railway . .	Swance .	Mianwali .	Mianwali.

APPENDIX IV—*contd.*

Miscellaneous—*contd.*

Statement No. 3—*contd.*

SCHEDULE—*contd.*

APPENDIX I—*contd.*

[See *Clause* (a) *of proviso to entry 1 in first column of Schedule*—concld.]

No.	Name of mine.	Name of owner.	Situation.		
			Village.	Sub-division.	District.
		SIND.			
		STONE MINE.			
1	Rohri . . .	N. W. Railway . .	Rohri . .	Rohri .	Sukkur.
		UNITED PROVINCES.			
		STONE MINE.			
1	Sankergarh . .	Sheikh Hidayatullah .	Tala . .	Allahabad .	Allahabad .
2	Sankergarh . .	Jethanand . . .	Do. . .	Do. .	Do.
3	Sankergarh . .	Govindram Sindhi . .	Benipur .	Do. .	Do.
4	Shankergarh . .	Pars Ram . . .	Shankergarh .	Do. .	Do.
5	Hajitola (Sankergarh)	Govindram Sindhi . .	Hajitola .	Do. .	Do .
6	Lakhanpur (Sankergarh).	L. P. Pandey and Sons .	Lakhanpur .	Do. .	Do.
7	Kulmajra . .	Pars Ram . . .	Kulmajra .	Maw . .	Banda.
8	Kulmajra . .	Bhagwandin . .	Do. .	Do. .	Do.
9	Sheora . . .	Nazir Hussain . .	Gulpura .	Jhansi-Math	Jhansi.
10	Sheora . . .	Ram Harak . . .	Do. .	Do. .	Do.
11	Sheora . . .	Ram Charan and Ram Gopal.	Tari . .	Do. .	Do.
12	Sheora . . .	Debi Sahai and Kali Charan.	Do. .	Do. .	Do.
13	Sheora . . .	Murlidhar and Tek Chand	Do. .	Do. .	Do.
14	Chandpur Jahazpur .	Randhir Singh . .	Chandpur Jahazpur.	Lalitpur .	Do.
15	Chandpur Jahazpur .	Shiam Lal Tara Chand and Company.	Jhilgawan .	Do. .	Do.
16	Hardari Nos. 1 and 2	Pt. Shiamlal Tarachand and Company.	Hardari .	Do. .	Do.
17	Sheora Hill . .	G. I. P. Railway (Contractor--Uma Shankar).	Todi . .	Jhansi .	Do.
		OCHRE MINE.			
1	Lakhanpur .	R. P. Mustaphy . .	Lakhanpur .	..	Banda.

APPENDIX IV—*contd.*

Miscellaneous—*contd.*

Statement No. 3—*concld.*

SCHEDULE—*concld.*

APPENDIX II.

FORM OF REPORT.

[See *Condition (1) in third column relating to entry 1 in first column of Schedule.*]

1. Name and situation of the mine.
2. Name of mineral worked.
3. Name and postal address of owner.
4. Name and postal address of manager.
5. Depth of the mine measured from its highest to its lowest point.
6. Number of persons employed in the mine.
7. Whether explosives are used in the mine.
8. The general condition of the mine as to safety in working.
9. Whether underground workings have been made or are likely to be made.
10. The date on which the mine was opened (for new mines only).

Signature of owner, agent or manager.

A. G. CLOW,

Secy. to the Govt. of India.

APPENDIX IV—*contd.*

Miscellaneous—*contd.*

Statement No. 4.

NOTIFICATION.

New Delhi, the 22nd February 1938.

No. M.-1028(1).—In exercise of the powers conferred by section 29 of the Indian Mines Act (IV of 1923), the Central Government is pleased to direct that the following amendments shall be made in the Indian Oil Mines Regulations, 1933, the same having been previously published as required by sub-section (1) of section 31 of the said Act, namely :—

I. In regulation 1 of the said regulations—

(*a*) in sub-regulation (2), for the words and figures "every oil mine other than an oil mine subject to the Lanywa Oil Mine Regulations, 1933", the words "all oil mines" shall be substituted ;

(*b*) sub-regulation (3) shall be omitted.

II. In Regulation 2 of the said Regulations—

(*a*) in the proviso to clause (*b*) for the words "Local Government", the words "Central Government" shall be substituted ;

(*b*) clause (*c*) shall be omitted ; and

(*c*) clauses (*d*) and (*e*) shall be relettered as clauses (*c*) and (*d*) respectively.

III. Regulation 3 of the said Regulations shall be omitted.

IV. In regulations 4, 6 and 18 of the said Regulations, the words "and to the Warden" shall be omitted.

V. In Regulations 5 and 7 of the said Regulations—

(*a*) for the words "in triplicate" the words "in duplicate" shall be substituted ; and

(*b*) the words "and one copy to the Warden" shall be omitted.

VI. In regulations 8, 9, 11, 14 and 15 of the said regulations, the words "and the Warden" wherever they occur, shall be omitted.

VII. In regulation 11 of the said Regulations, for the words "Local Government" wherever they occur, the words "Central Government" shall be substituted.

VIII. In regulation 19 of the said Regulations the words "or the Warden" shall be omitted.

IX. In regulation 41 of the said Regulations, for the words "Local Government" wherever they occur, the words "Chief Inspector" shall be substituted.

Statement No. 5.

NOTIFICATION.

New Delhi, the 23rd March 1938.

No. M.-1028(1).—In exercise of the powers conferred by section 29 of the Indian Mines Act, 1923 (IV of 1923), the Central Government is pleased to direct that the following further amendments shall be made with effect from the 1st April 1938 in the Indian Coal Mines Regulations, 1926, the same having been previously published as required by sub-section (1) of section 31 of the said Act, namely :—

1. In the said Regulations, for the words "Governor General in Council", "Government of India" and "Local Government", wherever they occur, the words "Central Government" shall be substituted.

APPENDIX IV—*contd.*

Miscellaneous—*contd.*

Statement No. 5—*contd.*

2. In the second proviso to regulation 23 of the said Regulations, for the words "Province in which the appellant is employed" the words "part of British India in which the mine or part of the mine is situated" shall be substituted.

3. In sub-regulation (5) of regulation 31 of the said Regulations, the words "and in such local official gazettes as the Board may direct" shall be omitted.

4. In clause (*g*) of regulation 48 of the said Regulations, the words "and in the local official gazette" shall be omitted.

5. In sub-regulation (3) of regulation 76 of the said Regulations, for the word "province" the words "part of British India" shall be substituted.

A. G. CLOW,
Secretary to the Government of India.

Statement No. 6.

NOTIFICATION.

New Delhi, the 23rd March 1938.

No. M.-1028(2).—In exercise of the powers conferred by section 29 of the Indian Mines Act, 1923 (IV of 1923), the Central Government is pleased to direct that the following further amendments shall be made with effect from the 1st April 1938 in the Indian Metalliferous Mines Regulations, 1926, the same having been previously published as required by sub-section (1) of section 31 of the said Act, namely:—

1. In regulations 2 and 10 of the said Regulations, for the words "Local Government", wherever they occur, the words "Central Government" shall be substituted.

2. In regulation 15 of the said Regulations, for the words "Governor General in Council" the words "Central Government" shall be substituted.

A. G. CLOW,
Secretary to the Government of India.

Statement No. 7.

NOTIFICATION.

Simla, the 20th May 1938.

No. M.-955.—In exercise of the powers conferred by section 29 of the Indian Mines Act, 1923 (IV of 1923), the Central Government is pleased to direct that the following further amendments shall be made in the Indian Coal Mines Regulations, 1926, the same having been previously published as required by sub-section (*1*) of section 31 of the said Act, namely:—

In the said Regulations—

I. For regulation 2, the following regulation shall be substituted, namely:—

"2. In these regulations, unless there is anything repugnant in the subject or context,—

(*a*) 'the Act' means the Indian Mines Act, 1923;

APPENDIX IV—*contd.*

Miscellaneous—*contd.*

Statement No. 7—*contd.*

(*b*) 'approved safety lamp', 'approved flame safety lamp' and 'approved electric torch' mean respectively, a safety lamp, a flame safety lamp or an electric torch manufactured by such firm and of such type as the Chief Inspector may from time to time specify by notification in the Gazette of India, and includes any other safety lamp or electric torch approved by the Chief Inspector by an order in writing;

(*c*) 'the District Magistrate', in relation to any mine, means the District Magistrate of the district in which the mine is situated:

Provided that in the case of a mine which is situated partly in one district and partly in another, the District Magistrate for the purposes of these regulations shall be the District Magistrate authorised in this behalf by the Central Government;

(*d*) 'Form' means a Form as set out in Schedule I;

(*e*) 'Permitted Explosive' means an explosive permitted by the Chief Inspector under such definition and subject to such conditions as he may from time to time lay down by notification in the Gazette of India;

(*f*) 'ventilating district' means such part of a mine as has an independent intake airway commencing from a main intake airway, and an independent return airway terminating at a main return airway ".

II. In regulation 13—

(i) after the words " outbreak of fire ", the words " or smoke, or other indication of outbreak of fire or an influx of noxious gases " shall be inserted; and

(ii) for the words " the occurrence of such accident, explosion, ignition, outbreak or irruption " the words " any such occurrence " shall be substituted.

III. In regulation 15, after sub-regulation (*3*) the following sub-regulation shall be inserted, namely:—

"(*3A*). (i) The owner, agent or manager of every mine shall also keep a separate plan showing the system of ventilation in the mine, and, in particular, the general direction of the air-currents, the points where the quantity of air is measured and the principal devices for the regulation and distribution of the air. So far as practicable the intake airways shall be coloured blue and the return airways red.

(ii) The positions of any underground ambulance stations and telephones shall be indicated on the plan.

(iii) The code of signs set out in Schedule II shall be utilised in plans made under this sub-regulation."

IV. In sub-regulation (*2*) of regulation 30 after clause (*c*) the following clause shall be added, namely:—

"(*d*) certificates of competency to fire shots in a mine (in these regulations referred to as shot-firers' certificates) ".

V. After regulation 39 the following regulation shall be inserted, namely:—

" 39-A. No person shall be admitted as a candidate at any examination for a shot-firer's certificate unless he has attained the age of 21 years and has satisfied the Board of Examiners that he has had two years' practical experience of underground work in a coal mine of which at least six months shall have been practical experience in connection with shot-firing ".

VI. To clause (*c*) of regulation 40 the following shall be added, namely:—

" as detailed in clause (*a*) of regulation 40-A".

APPENDIX IV—*contd.*

Miscellaneous—*contd.*

Statement No. 7—*contd.*

VII. After regulation 40 the following regulation shall be inserted, namely :—

"40-A. Examinations for shot-firers' certificates shall be conducted orally in English or in the vernacular language of the district in which the examination is held and shall be designed to test the candidate's knowledge of the following subjects, namely :—

(*a*) the charging and firing of shots of gunpowder and high explosives ;

(*b*) the provisions of the regulations, rules and bye-laws under the Act relating to the handling and use of explosives ; and

(*c*) the examination of a working place after shot-firing".

VIII. In regulation 42—

(i) in sub-regulation (*1*) after clause (*d*) the following clause shall be inserted, namely :—

"(*e*) in the case of an examination for a shot-firer's certificate..... .....1."

(ii) for sub-regulation (*2*) the following sub-regulation shall be substituted, namely :—

"(*2*) The amount of any fee referred to in sub-regulation (*1*) less the following amounts shall be returnable to the person by whom it has been paid if the application of such person for admission to the examination is rejected :—

(*a*) annas eight in the case of the fee paid for admission to an examination for a shot firer's certificate ;

(*b*) Re. 1 in the case of the fee paid for admission to an examination for a sirdar's certificate ;

(*c*) Rs. 5 in any other case."

IX. In regulation 44, for the words and figures "a fee of one rupee in the case of a sirdar's certificate and of two rupees in any other case shall be payable in the manner prescribed in regulation 153" the following shall be substituted, namely :—

"the following fees shall be payable in the manner prescribed in regulation 153 :—

	Rs.	a.	p.
(*a*) In the case of a manager's or surveyor's certificate . . .	2	0	0
(*b*) In the case of a sirdar's certificate	1	0	0
(*c*) In the case of a shot-firer's certificate	0	8	0

X. In regulation 45, regulation 47 and regulation 49 after the words "sirdar's certificate" wherever they occur, the words "or shot-firer's certificate" shall be inserted.

XI. In regulation 58, to sub-clause (*2*) of clause (*i*), the following shall be added, namely :—

"and in particular at all such engines, where electric lighting is used, an additional light having no connection with the electric supply shall be kept burning at night".

XII. In regulation 70—

(*i*) for sub-regulation (*4*) the following sub-regulations shall be substituted, namely :—

"(*4*) The inspection shall be made with an approved locked flame safety lamp and no additional light shall be used other than an approved electric torch or lamp :

Provided that in the case of a mine in which inflammable gas has never been found and is unlikely to be found, the inspection, except in the region of an underground fire or of any stoppings made to control a fire, may be made with any electric torch or lamp if it is used in conjunction with an open light or an approved locked flame safety lamp.

(*4A*) In any inspection in the region of an underground fire, or of any stoppings made to control a fire, a cage containing small birds or other means of detecting carbon monoxide gas approved by the Chief Inspector shall be carried," and

(*ii*) sub-regulation (8) shall be omitted.

APPENDIX IV—*contd.*

Miscellaneous—*contd.*

Statement No. 7—*contd.*

XIII. After regulation 70, the following regulation shall be inserted, namely:—

"70A. (*1*) The first inspection of a mine or part of a mine which is re-opened after a discontinuance of mining for a period exceeding seven days and of any part of a mine after being dewatered, shall be made by a person possessing the qualifications prescribed in sub-regulation (*1*) of regulation 71 with an approved locked flame safety lamp.

(*2*) No additional light shall be used in any such inspection other than an approved electric torch or lamp.

(*3*) The result of every such inspection shall be reported by the person making it in the manner required by sub-regulation (*5*) of regulation 70 and shall be recorded in the book maintained in accordance with sub-regulation (*2*) of regulation 70."

XIV. For regulation 72, the following regulation shall be substituted, namely:—

"72. (*1*) If at any time it is found by the person for the time being in charge of a mine or any part thereof that, by reason of any cause whatever, the mine or part is dangerous, every workman shall be withdrawn from the mine or part, and a competent person appointed by the manager for the purpose shall inspect the mine or part.

(*2*) The person so appointed shall make a full and accurate report of the condition of the mine or part and no workman shall, except in so far as is necessary for enquiring into the cause of the danger or for the removal thereof or for exploration be re-admitted into the mine or part, until the mine or part is reported by the person so appointed not to be dangerous.

(*3*) Every report made under sub-regulation (2) shall be recorded without delay in a paged book, which shall be kept at the mine for the purpose, and shall be dated and signed by the person who made the inspection:

Provided that—

(i) where the danger arises from the presence of inflammable or noxious gas, the provisions of regulation 72-A shall be followed;

(ii) where the appearance in any part of a mine of smoke or other sign indicates that fire has or may have broken out, the provisions of regulation 87F shall be followed".

XV. After regulation 72 the following regulations shall be inserted, namely:—

"72-A. (*1*) When inflammable gas or any noxious gas is detected in any working place or any part of a mine, all persons shall be withdrawn from the place or part, and the place or part shall be immediately fenced off so as to prevent persons inadvertently entering the same. The official-in-charge of the district in which the gas has been detected shall take steps, without delay, to remove the gas by improving the ventilation and shall also send a report of the occurrence to the manager.

(*2*) During the removal of such gas no naked light shall be used in the ventilating district in which the gas is detected and all persons, except those necessary for such removal, shall be withdrawn from the return side of the ventilating district unless the quantity of gas is, in the opinion of the manager or other responsible official-in-charge of the mine in the manager's absence, so small that such withdrawal of persons is unnecessary.

(*3*) No workman shall be readmitted into the place or part referred to in sub-regulation (*1*) until a competent person appointed by the manager for the purpose has inspected the place or part and has reported that the place or part is free from gas. Every such report shall be in writing and shall be dated and signed by the person who made the report.

(*4*) The inspection required by sub-regulation (*3*) shall be made with an approved locked flame safety lamp and in the case of noxious gas, also with a cage containing small birds or other means of detecting carbon monoxide gas approved by the Chief Inspector.

APPENDIX IV—*contd.*

Miscellaneous—*contd.*

Statement No. 7—*contd.*

(5) Particulars of every occurrence referred to in sub-regulation (1) and every report submitted under sub-regulation (3) shall be recorded in a paged book, which shall be kept at the mine for the purpose, and it shall be stated in the book where and when the gas was found and when it was removed.

72-B. (1) No coal shall be extracted from any spot which lies vertically below—

(*a*) any part of the bed of any river, tank or reservoir, or

(*b*) any spot lying within a horizontal distance of 50 feet from either bank of a river or the boundary of a tank or reservoir,

except with the written permission of the Chief Inspector and subject to such conditions as he may specify.

(2) For the purposes of this regulation, where sand or alluvium are lying in the course of a river, or in a tank or reservoir the bed of the river, tank or reservoir at that point shall be deemed to coincide with the surface of the hard strata underlying such sand or alluvium.".

XVI. In regulation 81—

(i) in sub-regulation (1)—

(*a*) for the word " Reasonable " the word " Proper " shall be substituted; and

(*b*) for the words " to isolate " the words " and adequate steps shall be taken to isolate " shall be substituted.

(ii) for sub-regulation (2), the following sub-regulation shall be substituted, namely :—

"(2) Where in the opinion of an Inspector, the provision made or steps taken for the purposes specified in sub-regulation (*1*) are inadequate, he may require such additional provision or steps as he shall specify to be made or taken."

XVII. In regulation 85, the words " or an outbreak of fire " shall be omitted.

XVIII. After regulation 86, the following headings shall be inserted, namely :—

"CHAPTER VII A.

SPECIAL PRECAUTIONS AGAINST SPONTANEOUS COMBUSTION AND UNDERGROUND FIRES."

XIX. After regulation 87, the following regulations shall be inserted, namely :—

"87A. (*1*) All surface structures and supports within a horizontal distance of 25 feet from the perimeter of shafts and the covering of all shafts sealed off or covered for ventilation purposes, and all fan drifts, fan casings and parts of fans within such drifts or casings, shall be of non-inflammable material:

Provided that this sub-regulation shall not apply to—

(*a*) structures and supports and the covering of shafts, if they are so protected by non-inflammable material as to eliminate the risk of fire;

(*b*) the small lid or covering of a shaft covering operated by the rope cappel; and

(*c*) temporary structures, supports and coverings at the top of shafts which are in the course of being sunk:

Provided further that until 30th April 1940 this sub-regulation shall not apply to wooden headgears which were in use on the date on which this sub-regulation came into force.

(2) All air-crossings in main intake or main return airways and all ventilation or separation doors in any fan house or fan drift and in the vicinity of shaft bottoms or air-crossings in main intake or main return airways shall be constructed of non-inflammable material and shall be designed, as far as practicable, to prevent leakage.

APPENDIX IV—*contd.*

Miscellaneous—*contd.*

Statement No. 7—*contd.*

(*3*) No timber or other inflammable material shall be used in the construction of or in connection with any underground engine-house or electrical sub-station, switch house or motor room."

87 B. No oil, grease, canvas, or other highly inflammable material shall be stored underground in any mine except in a fire-proof receptacle or chamber.

87 C. Adequate means of extinguishing fire shall be provided at any part of a mine where timber, grease or other inflammable material is stored and at all insets where timber is used for the construction of the staging and at every pit-head, pit-bottom engine-room and electrical apparatus room.

87 D. (*1*) No person shall light a fire or deposit ashes or heated material in any coal quarry, or on any exposed outcrop of coal, or on any ground damaged by the extraction of coal in which open fissures or cavities exist.

(*2*) No person shall light a fire or permit a fire to be lighted in any underground part of a mine:

Provided that nothing in this sub-regulation shall apply to the use in a mine to which regulation 123 does not apply, of blow lamps or electric repairing apparatus if permitted by a special written order granted by the manager of the mine. The order shall specify the person who shall be in charge of the blow lamp or apparatus and shall require such person to bring it back to the surface when no longer required.

(*3*) No person shall light a fire or permit a fire to be lighted within a distance of 40 feet from the perimeter of any shaft except in accordance with a written order granted by the manager of the mine and only for a special purpose specified in such order:

Provided that this sub-regulation shall not apply to boilers other than vertical boilers.

(*4*) All such orders shall be recorded in a paged book kept in the office of the mine.

(*5*) No person shall ignite a "feeder" or an accumulation of gas.

87 E. No excavation shall be done in any part of a seam lying under any part of another seam which is on fire or is believed to be on fire or which is connected by a goaf or by broken strata to any fire except by a method which will maintain the strata between the seams *in situ* and intact.

87 F. (*1*) On the appearance in any part of a mine of smoke or other sign indicating that a fire has or may have broken out all workmen other than those whose presence in the mine is deemed necessary for dealing with the emergency shall be immediately withdrawn from the mine. No workmen, other than the men required for dealing with or damming off the fire, shall be readmitted until either the fire has been extinguished or the part in which it exists has been effectively dammed off and an examination has been made by the manager and the competent person appointed under regulation 72 and the mine has been reported to be safe. Every such report shall be recorded without delay in a paged book, which shall be kept at the mine for the purpose and shall be dated and signed by the manager and the competent person who made the inspection:

Provided that, in a mechanically ventilated mine in which the use of safety lamps is not required other than for inspection purposes, this regulation shall apply only to the ventilating district or districts, that may be affected.

(*2*) The examination required by sub-regulation (*1*) shall be made with an approved locked flame safety lamp and a cage containing small birds or other means of detecting carbon monoxide gas approved by the Chief Inspector. No additional light shall be used other than an approved electric torch or lamp.

87 G. (1) Approved locked safety lamps or electric torches shall be exclusively used in the work of dealing with or damming off an underground fire:

Provided that where, in the opinion of the manager, it is necessary to take immediate steps to deal with an outbreak of fire, the provisions of the sub-regulation shall be deemed to have been complied with if the workmen engaged in dealing with the fire are provided with approved safety lamps or electric torches as quickly as is reasonably practicable.

APPENDIX IV—*contd.*

Miscellaneous—*contd.*

Statement No. 7—*contd.*

(*2*) During the work of dealing with or damming off an underground fire a cage or cages containing small birds or other means of detecting carbon monoxide gas approved by the Chief Inspector shall be kept at all places in which persons may be in danger from noxious gases.

87 H. Approved locked safety lamps or electric torches shall be exclusively used in any ventilating district of a mine in which there is an underground fire whether such fire is sealed off by stoppings or not:

Provided that the Chief Inspector may in the case of any mine, grant exemption from this regulation under such conditions as he may impose, if in his opinion, the use of approved safety lamps or electric torches in such mine is not necessary.

87 I. (*1*) In any ventilating district of a mine which is not naturally wet throughout and—

(*i*) in which there is an underground fire, whether sealed off or not, or

(*ii*) in which the extraction of pillars is in hand or is about to commence;

the following precautions with respect to danger from dry coal dust shall be taken:—

(*a*) All haulage and tramming roads shall be systematically kept clear of accumulations of dry coal dust.

(*b*) All such roads shall be systematically treated with water or incombustible dust in such a manner as to prevent an explosion from being initiated or propagated by coal dust. If incombustible dust is used for the purpose, it shall be of a kind which is not likely to be injurious to the health of workmen.

(*2*) The precautions laid down in sub-regulation (*1*) shall also be observed at all places within 400 feet of an area—

(*i*) which has been or is being sealed off on account of fire; or

(*ii*) in which pillars are being extracted.

(*3*) The Chief Inspector may, by order in writing, grant, subject to such conditions as he may impose, exemption from the provisions of sub-regulation (*1*) or sub-regulation (*2*) to any mine or part of a mine on the ground that, on account of the special character of the mine or part, the observance of the precautions laid down therein is not necessary.

87 J. In any working mine in which a fire is known or is believed to exist—

(*a*) adequate precautions shall be taken to prevent the passage of air from the mine through any goaf or through broken strata connected with the fire; and

(*b*) no work, other than work required by clause (*a*) of this regulation, shall be done in any part of the mine which is not effectively sealed off from any such goaf or broken strata.

XX. For regulation 93, the following regulation shall be substituted, namely:—

"93. Where a main haulage road extends to a distance of more than 3,000 feet from the shaft or the entrance to the mine, efficient means of telephonic communication shall be provided and maintained between a suitable station near the end of every such main haulage road, the pit-bottom, and the surface, or between a suitable station near the end of every main haulage road and the entrance to the mine:

Provided that the Chief Inspector may by order in writing require the provision of means of telephonic communication where in any mine the main haulage extends to a distance of less than 3,000 feet from the shaft or the entrance to the mine, where travelling is unduly arduous:

Provided further that the Chief Inspector may by order in writing permit the use of other suitable means of communication in cases in which the conditions in the mine are not suitable for telephones."

XXI. For regulation 95, the following regulation shall be substituted, namely:—

"95. (*1*) No person shall permit a tub or tubs to run uncontrolled except with the consent of the manager.

APPENDIX IV—*contd.*

Miscellaneous—*contd.*

Statement No. 7—*contd.*

Provided that the Chief Inspector may, by order in writing, prohibit the uncontrolled movement of tubs at any place where, in his opinion, there would be danger of injury to persons.

(2) No person shall ride on any tub, truck or wagon, either underground or aboveground, except with the written permission of the manager."

XXII. In regulation 96-A, the words "in which inflammable gas has been found during the previous twelve months or in which there is a risk of inflammable gases entering the mine from an underground fire" shall be omitted.

XXIII. After regulation 101, the following regulation shall be inserted, namely :—

"101 A. No liquid oxygen explosive shall be used in any underground part of a mine."

XXIV. For regulations 108 and 109, the following regulations shall be substituted, namely :—

"108. (1) No shot shall be stemmed or fired except by or under the personal supervision of a competent person appointed by the manager by order in writing to be a shot-firer.

(2) In any mine in which more than 50 persons are employed underground at any one time, no person shall be so appointed or shall perform the duties of a shot firer who is responsible for making inspections under sub-regulation (2) of regulation 70.

(3) With effect from the 1st day of April 1940, no person shall be appointed as a shot-firer under sub-regulation (1) unless he holds either a shot-firer's certificate or a sirdar's certificate or a manager's certificate granted under these regulations.

109. Every shot-firer shall, before a shot is fired by him or under his supervision, see that all persons in the vicinity have taken proper shelter at a safe distance, he shall also take suitable steps to prevent any person approaching the shot and shall himself take proper shelter."

XXV. For regulations 115 and 115-A, the following regulation shall be substituted, namely :—

"115. (1) In any place in a mine in which the use of a locked safety lamp is for the time being required by or in pursuance of these regulations—

(a) no shot shall be stemmed or fired by any person who does not hold a sirdar's certificate endorsed for gas testing;

(b) no shot shall be fired until the shot-firer has examined both the place where the shot is to be fired and all accessible places within a radius of 60 feet for the presence of inflammable gas and has found such places free from gas;

(c) no shot of a Permitted Explosive shall be fired except by means of a shot-firing apparatus of a type approved by the Chief Inspector and subject to such conditions as he may from time to time lay down by notification in the *Gazette of India:*

Provided that the Chief Inspector may, in special cases, by order in writing, permit, subject to such conditions as he may specify, the use of any other shot-firing apparatus.

(2) (i) Every approved shot-firing apparatus in use in a mine shall, once at list in every three months, be cleaned and thoroughly overhauled by a competent person appointed in writing by the manager.

(ii) No. person shall use or allow to be used any approved apparatus which has become unsafe or defective.

(3) No shot shall be fired at any place underground in a mine unless the place itself and all accessible places within a distance of 60 feet—

(a) are naturally wet, or

(b) have been drenched with water to such an extent that there will be no danger of dry coal-dust being raised into the air by the shot, or

(c) have been thoroughly treated with incombustible dust."

APPENDIX IV—*contd.*

Miscellaneous—*contd.*

Statement No. 7—*contd.*

XXVI. For regulations 116, the following regulation shall be substituted, namely :—

"116. No explosive other than a Permitted Explosive shall be used—

(*a*) in any mine in which inflammable gas has within the previous twelve months been reported to be present or in which safety lamps are required, by or in pursuance of these regulations, to be used for any purpose other than inspections ; and

(*b*) in any other mine in any main haulage road or main intake or main return airway or any place immediately contiguous to such road, intake, airway or place unless such road, intake, airway or place is naturally wet throughout :

Provided that in the case of any mine or any part of a mine and exemption may be given by the Chief Inspector, subject to such conditions as he may impose, on the ground that, on account of the special charater of the mine, the prohibition of the use of explosives other than Permitted Explosives is not necessary."

XXVII. After regulation 116A, the following regulation shall be inserted, namely :—

"116-B. In any underground part of a mine two or more shots shall not be charged or fired in the same place simultaneously, if the explosive used is not a Permitted Explosive :

Provided that this regulation shall not apply to—

(*a*) working places in which the roof, floor and sides within a radius of 100 feet of the place where shots are to be fired are naturally wet ; or

(*b*) a cross-measure drift in stone if such drift does not contain dry coal-dust ; or

(*c*) shafts which are in the process of being sunk through or across the strata."

XXVIII. In regulation 117, for the words "person who fired the shot or a" the words "shot-firer appointed under regulation 108 or other" shall be substituted.

XXIX. For regulations 123 to 125, the following regulations shall be substituted, namely :—

"123. (*1*) No artificial light other than an approved locked safety lamp shall be allowed or used—

(*a*) in any seam in a mine in which an explosion or ignition of inflammable gas has occurred during the previous twelve months :

Provided that the Chief Inspector may, subject to such conditions as he may impose, exempt any mine from the operation of this clause, on the ground that on account of the special character of the mine the use of safety lamps is not necessary ;

(*b*) in any place in a mine in which there is or is likely to be any such quantity of inflammable gas as to render the use of naked lights dangerous ;

(*c*) in any working near a place in which there is likely to be an accumulation of inflammable gas ; or

(*d*) in any ventilating district of a mine in which inflammable gas has been found during the previous twelve months.

(*2*) If any difference of opinion arises between an Inspector and a manager on the question whether the conditions specified in clauses (*b*) and (*c*) of sub-regulation (*1*) exist in any mine, the question shall be referred to the Chief Inspector whose decision thereon shall be final.

(*3*) In the case of any mine to which clause (*d*) of sub-regulation (*1*) applies the Chief Inspector may, if safety lamps are not immediately available, grant a temporary exemption from the operation of that clause, subject to such conditions as he may specify, until such time as safety lamps can be obtained.

APPENDIX IV—*contd.*

Miscellaneous—*contd.*

Statement No. 7—*contd.*

(*4*) In any mine or part of a mine in which safety lamps have been in use in compliance with the provisions of sub-regulation (1), no artificial light other than an approved locked safety lamp shall subsequently be allowed or used, except with the written consent of the Chief Inspector.

Explanation.—Where the ventilation in a mine is not mechanically controlled, the ventilating district shall be deemed to include the whole mine. Where the ventilation in part only of a mine is not mechanically controlled, the whole of the part in which ventilation is not mechanically controlled shall be deemed to be a single ventilating district.

124. Notwithstanding anything contained in regulation 123, fixed electric lights from power mains may be used in any part of a mine which is not within 600 feet of any working face, provided such installation complies with the rules made under the Indian Electricity Act, 1910, relating to the use of electric energy in parts of mines in which inflammable gas is likely to occur in quantity sufficient to be indicative of danger.

125. In any mine in which inflammable gas has been found during the previous twelve months no advance gallery shall be driven more than ten feet ahead of the widened gallery and in every such gallery the ventilating current shall be conducted as near to the working face as is practicable."

XXX. In regulation 127—

(i) in clause (*a*) after the word "appointed" the words "in writing" shall be inserted and for the word "used" the words "issued for use" shall be substituted;

(ii) for clause (*b*) the following clause shall be substituted, namely:—

"(*b*) A competent person appointed in writing by the manager for the purpose shall examine every safety lamp at the surface immediately before it is taken underground for use and shall assure himself, as far as practicable, from external observation that each lamp is in safe working order and securely locked. The person so appointed shall not be the banksman except in a mine where the number of persons employed underground is not more than 50 at any one time."

(iii) Clauses (*d*) and (*e*) shall be renumbered as clauses (*f*) and (*g*), respectively.

(iv) Before clause (*f*), as renumbered, the following clauses shall be inserted, namely:—

"(*d*) A competent person appointed in writing by the manager for the purpose shall examine every safety lamp on its being returned, after use underground. If on such examination any lamp is found to be damaged or misused, he shall record the nature of the damage or misuse in a book to be kept at the mine for the purpose. Every new entry in the book shall be shown to the manager without delay.

(*e*) The manager or a competent official appointed in writing by the manager for the purpose, other than the persons referred to in clauses (*a*) and (*b*) of this regulation, shall examine thoroughly all safety lamps in use at a mine at least once in every week, and shall record the result of his examination in a book kept at the mine for the purpose. If any lamp is found to be defective, it shall not be reissued for use until the defect has been remedied."

(v) After clause (*g*) as renumbered, the following clauses shall be inserted, namely:—

(*h*) No glass of an approved flame safety lamp shall be replaced except by a flame lamp glass manufactured by such firm and of such type and satisfying such conditions as the Chief Inspector may from time to time specify by notification in the *Gazette of India*.

(*i*) No bulb of an approved electric safety lamp shall be replaced except by an electric lamp bulb manufactured by such firm and of such type and satisfying such conditions as the Chief Inspector may from time to time specify by notification in the *Gazette of India*."

XXXI. In regulation 133 the words "or fire" shall be omitted.

XXXII. Regulation 135 shall be omitted.

XXXIII. The Schedule appended to the said Regulations shall be numbered as Schedule I, and

APPENDIX IV—*contd.*

Miscellaneous—*contd.*

Statement No. 7—*contd.*

in the said Schedule, as so numbered, for Form IX the following Form shall be substituted, namely:—

FORM IX.

(See Regulation 13.)

Notice of occurrence.

From _____

_____

_____

To

The CHIEF INSPECTOR of MINES in INDIA,

(through the $\frac{\text{District}}{\text{Sub-Divisional}}$ Magistrate of.....).

Date *19* .

Sir,

I have the honour to furnish the following particulars of an occurrence

of { a fatal accident / a serious accident / an accidental explosion or ignition / an outbreak of fire / smoke or other indication of outbreak of fire / an influx of noxious gases / an irruption of water } at the.....Mine.

1. Situation of the mine. (Village, Station, District, Province).
2. Name and postal address of owner.
3. Particulars of persons killed and injured, if any—

Name.	Sex.	Killed or Injured.	Age.	Occupation.

4. Date and hour of the occurrence.
5. Place of the occurrence.
6. Cause and description.
7. Classification of accident.*
8. Nature of injury, if any, and, if fatal, cause of death.

I have the honour to be,
Sir,
Your most obedient servant,

Owner.
Agent.
Manager.

*Under one or other of the following heads, namely:—

(1) Explosions and ignitions of fire damp; (2) explosions of coal-dust; (3) falls of roof; (4) falls of sides; (5) in shafts (overwinding); (6) in shafts (ropes and chains breaking); (7) in shafts (while ascending or descending by machinery); (8) in shafts (falling down shaft); (9) in shafts (things falling down shafts); (10) in shafts (miscellaneous); (11) suffocation by gases; (12) by explosives; (13) irruptions of water; (14) haulage; (15) by underground machinery; (16) sundries underground; (17) by surface machinery; (18) boilers or pipes bursting; (19) on surface railways or tramways belonging to the mine; (20) by electricity; and (21) miscellaneous on surface."

APPENDIX IV—*contd.*

Miscellaneous—*contd.*

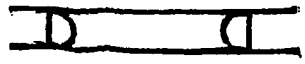
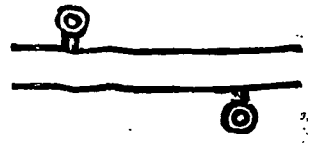
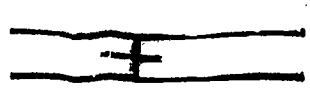
Statement No. 7—*concld.*

XXXIV. After Schedule I, the following Schedule shall be added, namely :—

SCHEDULE II.

[See Regulation 15 (3A).]

Code of Signs.

BRICK, STONE, OR CONCRETE VENTILATION STOPPINGS	
FIRE DAMS OR SEALS	
WATER DAMS	
DOORS	
REGULATORS	
AIR CROSSINGS	
TELEPHONES	
UNDERGROUND AMBULANCE STATION IN RED .	
DIRECTION OF AIR CURRENT	

N. MAHADEVA AYYAR,
Secy. to the Govt. of India.

APPENDIX IV—*contd.*

Miscellaneous—*contd.*

Statement No. 8.

Dhanbad, the 27th May 1938.

Rules for the conduct of Examinations for Colliery Managers' and Surveyors' certificates of competency made by the Board of Examiners under Regulation 31(4) of the Indian Coal Mines Regulations, 1926.

For Rules (7) and (8) *substitute* as follows:—

7. The following shall be the maximum number of marks given for each subject:—

Colliery Managers' Certificates.

Subject.	First Class.			Second Class.		
	Papers.	Viva voce.	Total.	Papers.	Viva voce.	Total.
(*i*) Geology and Mining . . .	100	30	130	100	40	140
(*ii*) Ventilation, Explosions, Underground fires and Inundations.	100	30	130	70	30	100
(*iii*) Machinery	90	25	115	80	40	120
(*iv*) Surveying, Levelling and Mensuration.	45	15	60	45	15	60
(*v*) Management and Mining Legislation.	50	15	65	50	30	80
Total .	385	115	500	345	155	500

Surveyors' Certificates.

Written examination	100 marks.
Oral examination	40 marks.
Total .	140 marks.

8. In order to qualify a candidate must obtain 40 per cent. of the maximum marks for each subject of the written examination, 40 per cent. of the maximum marks for each part of the oral examination, and 60 per cent. on the whole examination (written and oral):

Provided that in the case of an examination for a Colliery Manager's certificate.

APPENDIX IV—*contd.*

Miscellaneous—*contd.*

Statement No. 8—*contd.*

(*a*) A candidate who fails to obtain 40 per cent. of the maximum marks in any one subject in the written examination but who nevertheless obtains 40 per cent. of the maximum marks in the oral examination in that subject and in all the other subjects (written and oral) taken individually and also obtains 60 per cent. or more of the maximum marks in the whole examination (written and oral) shall be eligible to be re-examined at the next succeeding written examination in the subject in which he so failed, and if he then obtains 60 per cent. of the maximum marks in such subject he shall be deemed to have qualified in the examination as a whole.

(*b*) A candidate who has obtained 40 per cent. of the maximum marks in each subject in the written examination and 60 per cent. or over in the written examination taken as a whole but has failed to secure 40 per cent. in any one or any two subjects of the oral examination but has secured not less than 50 per cent. of the maximum marks for the oral examination taken as a whole shall be eligible to be re-examined at the next succeeding oral examination in the subject or subjects in which he so failed, and if he then obtains 60 per cent. of the maximum marks in such subjects or each of such subjects he shall be deemed to have qualified in the examination as a whole.

(*c*) Every candidate who becomes eligible to be re-examined in one subject in the written examination or in one or two subjects in the oral examinations under Rule 8(*a*) or Rule 8(*b*) will be duly informed by the Chairman of the Board:

Provided further that if a candidate who is eligible under proviso (*a*) or proviso (*b*) is unable by reason of illness to attend at the next succeeding examination he may at the discretion of the Board be permitted to attend at the next respective succeeding examination.

W. KIRBY,

Chief Inspector of Mines in India,

and

Chairman of the Board of Examiners.

Statement No. 9.

Dhanbad, the 17th August 1938.

Rules for the conduct of Examinations for underground Shot-firers' certificates made by the Board of Examiners under Regulation 31 (4) of the Indian Coal Mines Regulations, 1926.

1. So far as is practicable the local examiners appointed by the Board shall be one or more colliery managers who shall be the holders of first or second class certificates and have a knowledge of the local vernacular, and an Inspector of Mines who shall also be Secretary.

2. The remuneration of each non-official examiner shall be a capitation fee of annas eight per candidate examined.

3. Examinations shall be held at such times and such places as may be fixed by the Board.

4. Examinations for shot-firers' certificates shall be conducted orally in English or in the vernacular language of the district in which the examination is held and shall be designed to test the candidate's knowledge of the following subjects, namely:—

(*a*) the charging and firing of shots of gunpowder and high explosives;

(*b*) the provisions of the regulations, rules and bye-laws under the Act relating to the handling and use of explosives; and

(*c*) the examination of a working place after shot-firing.

APPENDIX IV—*contd.*

Miscellaneous—*contd.*

Statement No. 9—*contd.*

5. Applications for examination shall be submitted on the prescribed form and with a receipted chalan for the prescribed fee to the Chief Inspector of Mines.

6. At the time of examination every candidate shall hand over to the examiners two unmounted photographs of himself of a size approximately 2 inches × 2½ inches, and one of the examiners shall endorse the photographs on the back with the name of the person whom they represent.

7. Before examining a candidate the local examiners shall satisfy themselves that—

(*a*) the photograph handed over by the candidate is a likeness of the candidate;

(*b*) the candidate has attained the age of 21 years;

(*c*) the candidate has had not less than two years' practical experience underground in a coal mine, of which at least six months shall have been practical experience in connection with shot-firing;

(*d*) the powers of eyesight and hearing of the candidate are such as to enable him to make underground inspections efficiently;

(*e*) the prescribed fee has been paid.

8. The local examiners shall record the left thumb impression of successful candidates.

W. KIRBY,
Chief Inspector of Mines in India,
and
Chairman of the Board of Examiners.

Statement No. 10.

NOTIFICATION.

Simla, the 24th August 1938.

No. M.-1055(1).—In exercise of the powers conferred by sub-section (1) of section 10 of the Indian Mines Act, 1923 (IV of 1923); and in supersession of the notification of the Government of Bihar, No. 213-VIIM.-10-Com.R., dated the 18th July 1936, the Central Government is pleased to constitute for the province of Bihar a Mining Board for coal mines and to direct that the said Board shall consist of the following persons, namely :—

(1) The Commissioner of the Chota Nagpur Division—*Ex-officio* Chairman (nominated by the Central Government);

(2) The Chief Inspector of Mines in India—*Ex-officio* Member;

(3) The Additional Deputy Commissioner, Dhanbad—*Ex-officio* Member (nominated by the Central Government);

(4) Mr. J. E. Phelps, Agent, East Indian Coal Company, Limited—Member (nominated by the Indian Mining Association);

(5) Mr. A. L. Ojha—Member (nominated as the result of an election between the members of the Indian Mining Federation and the Indian Colliery Owners Association);

(6) Mr. Shiva Kali Bose—Member (nominated by the Indian Colliery Labour Union) to represent the interest of miners; and

(7) Mr. S. B. Sen—Member (nominated by the Central Government) to represent the interest of miners.

M. S. A. HYDARI,
Secretary to the Government of India.

APPENDIX IV—*contd.*

Miscellaneous—*contd.*

Statement No. 11.

NOTIFICATION.

Simla, the 24th August 1938.

No. M.-1055(2).—In exercise of the powers conferred by sub-section (1) of section 10 of the Indian Mines Act, 1923 (IV of 1923), and in supersession of the notification of the Government of Bihar, No. 214-VII-M.-10/36-Com. R., dated the 18th July 1936, the Central Government is pleased to constitute for the province of Bihar a Mining Board for mines other than coal mines and to direct that the said Board shall consist of the following persons, namely :—

(1) The Commissioner of the Chota Nagpur Division—*Ex-officio* Chairman (nominated by the Central Government);

(2) The Chief Inspector of Mines in India—*Ex-officio* Member ;

(3) The Deputy Commissioner of Hazaribagh—*Ex-officio* Member (nominated by the Central Government);

(4) Mr. J. E. Phelps, Agent, East Indian Coal Company, Limited—Member (nominated by the Indian Mining Association);

(5) Rao Bahadur D. D. Thacker of Pure Jharia Colliery—Member (nominated as the result of an election between the members of the Indian Mining Federation and the Indian Colliery Owners Association);

(6) The Deputy Commissioner of Singhbhum—*Ex-officio* Member (nominated by the Central Government) to represent the interest of Miners; and

(7) The Chief Medical Officer of the Indian Copper Corporation, Limited, Ghatsila—*Ex-officio* Member (nominated by the Central Government) to represent the interest of miners.

M. S. A. HYDARI,

Secretary to the Government of India.

Statement No. 12.

Circular No. 1 of 1938.

Dhanbad, the 3rd January 1938.

Attention of Owners, Agents and Managers of coal mines is drawn to my Notification No. P.-2, dated the 15th December 1937, published in the *Gazette of India*, dated the 25th December 1937, the full text of which is reproduced below.

W. PENMAN,

Chief Inspector of Mines in India.

APPENDIX IV—*contd.*

Miscellaneous—*contd.*

Statement No. 12—*contd.*

NOTIFICATION.

Dhanbad, the 15th December 1937.

No. P.-2.—In exercise of the powers conferred by Regulation 2(*cc*) and Regulation 116-A (*b*) of the Indian Coal Mines Regulations, as published under Notification No. M.-1077, dated the 29th August 1936, and in supersession of Notification No. P.-1, dated Dhanbad, the 29th August 1936, the undernoted list of "Permitted" Explosives is hereby published for general information:—

List of "Permitted" Explosives.

Name of Explosive.	Place of manufacture.	Permissible maximum charge.
Monobel No. 1 . .	Ardeer, Ayrshire, Great Britain, and Modderfontein, South Africa.	28 ounces.
A. 2 Monobel . . .	Ardeer, Ayrshire, Great Britain, and Deerpark, Melbourne, Australia.	28 ounces.
Polar Dynobel No. 2 . .	Ardeer, Ayrshire, Great Britain.	28 ounces.
Samsonite No. 3 . .	Ardeer, Ayrshire, Great Britain, and Deerpark, Melbourne, Australia.	28 ounces.
Stonobel . . .	Ardeer, Ayrshire, Great Britain, and Deerpark, Melbourne, Australia.	28 ounces.
Roburite No. 4 . . .	Gathurst, Wigan, Great Britain.	28 ounces.
A. 1 Rounkol	Ardeer, Ayrshire, Great Britain.	18 ounces.

APPENDIX IV—*contd.*

Miscellaneous—*contd.*

Statement No. 12—*concld.*

Provided (*a*) that each cartridge of explosive shall be marked with the outline of a crown with the letter "P" in the centre and (*b*) that the explosive when used in any mine or place in which "permitted" explosives are required to be used by any Regulation or order under the Indian Mines Act, shall be fired by one of the following types of approved shot-firing apparatus:—

List of shot-firing apparatus.

Manufactured by.	Name of apparatus.
Magneto Exploders.	
British Insulated Cables, Limited, Prescot, Lancashire .	Helsby (1932) L. T.
Ditto .	Helsby (1933) L. T.
John Davis & Son (Derby) Limited, All Saints' Works, Derby.	Davis No. 15 X (1932) L. T.
General Electric Co., Ltd., Magnet House, Kingsway, London, W.C. 2.	Magnet (1932) L. T.
Battery Exploders.	
John Davis & Son (Derby) Limited, All Saints' Works, Derby.	Davis (1932) L. T.
General Electric Co., Ltd., Magnet House, Kingsway, London, W.C. 2.	G. E. C. (1933) L. T
Heyes & Co., Ltd., Wigan	Wigan No. 4 L. T.

Statement No. 13.

Circular No. 2 of 1938.

Dated Dhanbad, the 19th February 1938.

To

The Owner, Agent or Manager of Mines.

In accordance with section 5(2) of the Indian Mines Act, 1923, owners, agents or managers of mines are hereby informed that the following Act received the assent of the Governor General on the 3rd December 1937 and has been published in part IV of the *Gazette of India*, dated the 11th December 1937, copies of which are obtainable by purchase from the Manager of Publications, Civil Lines, Delhi.

D. PENMAN,
Chief Inspector of Mines in India.

APPENDIX IV—*contd.*

Miscellaneous—*contd.*

Statement No. 13—*contd.*

ACT No. XXIX OF 1937.

An Act further to amend the Indian Mines Act, 1923, for certain purposes.

Statement No. 14.

Circular No. 3 of 1938.

Dated Dhanbad, the 22nd April 1938.

From

W. KIRBY, ESQR., B. Sc., M. I. MIN. E.,

Chief Inspector of Mines in India.

To

The Owner, Agent or Manager of Mines.

Sir,

A Labour Enquiry Committee has been appointed by the Government of Bihar to conduct an enquiry into the conditions of industrial labour in Bihar and make recommendations. The Committee will shortly be touring all places concerned with labour and will visit mines to record oral evidence. The undersigned has been requested to ask you kindly to afford the Committee all facilities in carrying out the work entrusted to it.

I have the honour to be,

SIR,

Your most obedient servant,

W. KIRBY,

Chief Inspector of Mines in India.

APPENDIX IV—*concld.*

Miscellaneous—*concld.*

Statement No. 15.

Circular No. 4 of 1938.

Dated Dhanbad, the 14th June 1938.

To

The Owner, Agent and Manager of Mines.

In accordance with Section 5(2) of the Indian Mines Act, 1923, owners, agents and managers of mines are hereby informed that the following notification has been issued by the Government of India, Department of Labour and published in Part I of the *Gazette of India*, dated the 21st May 1938. Printed copies of the notification may be obtained by purchase from the Manager of Publications, Civil Lines, Delhi.

"Notification No. M-955, dated the 20th May 1938, notifying further amendments to the Indian Coal Mines Regulations, 1926."

The following notifications (Nos. M-955 (1) and M-955 (2), dated the 7th June 1938) issued by the Government of India, in the Department of Labour, have also been published in Part I of the *Gazette of India*, dated the 11th June 1938. They are reproduced below :—

"No M-955 (1).—In exercise of the powers conferred by sections 29 and 31-A of the Indian Mines Act, 1923 (IV of 1923), the Central Government is pleased to direct that the Supplementary Coal Mines (temporary) Regulations, 1936 and the Coal Mines (Temporary) Regulations, 1937, shall be cancelled.

No. M-955 (2).—In exercise of the powers conferred by sections 29 and 31-A of the Indian Mines Act, 1923 (IV of 1923), the Central Government is pleased to direct that the following amendment shall be made in the Supplementary Coal Mines (Temporary) Regulations, 1937, namely :—

In the said Regulations, regulations 6, 7 and 8 shall be omitted."

W. KIRBY,

Chief Inspector of Mines in India.

MGIPC—81—VIII-2-11—17-10-39—1,275.

INDIAN MINES ACT, 1923

ANNUAL REPORT

OF THE

CHIEF INSPECTOR OF MINES IN INDIA

FOR THE YEAR ENDING

31st DECEMBER 1939

PRINTED BY MANAGER, GOVERNMENT OF INDIA PRESS, CALCUTTA
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1940

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FROM

W. KIRBY, ESQ., B. SC., M. I. Min. E.,

CHIEF INSPECTOR OF MINES IN INDIA.

TO

THE SECRETARY TO THE GOVERNMENT OF INDIA,

DEPARTMENT OF LABOUR,

SIMLA.

Dated Dhanbad, the 17th May 1940.

SIR,

I have the honour to submit the report upon the inspection of mines in British India for the year ending 31st December 1939.

INTRODUCTION.

The Indian Mines Act, 1923, applies to British India only and not to the Indian States. For the complete figures of production of all minerals raised from excavations of all depths in British India and the Indian States reference may be made to the statements of the "Mineral Production of India" published annually in the "records of the Geological Survey of India and to the Quinquennial Review of the Mineral Production of India" published every five years by the same Department. Detailed information of the mineral industries in Mysore—where the Kolar gold field is situated—and Hyderabad (Nizam's Dominions) is given in the annual reports of the Chief Inspector of Mines in those States.

Section I.—Persons Employed.

During the year 1939 the daily average number of persons working in and about the mines regulated by the Indian Mines Act was 305,344, as compared with 306,260 in the previous year. The decrease was 916 persons or 0·30 per cent. Of these persons 146,827 worked underground, 76,659

in open workings and 81,858 on the surface. The number of men who worked underground, in open workings and on the surface and the women who worked in open workings and on the surface, were as follows :—

	Men.		Women.	
	1939.	1938.	1939.	1938.
Underground	146,827	140,651	..	..
In open workings	50,306	54,121	26,353	29,212
Surface	57,765	58,199	24,093	24,077
Total .	254,898	252,971	50,446	53,289

The daily average number of persons employed in coal mines was 201,989 which is 896 more than the number employed in 1938. Of these persons 53,639 were males employed in cutting coal, 33,820 were males employed as loaders of coal, and 23,004 were women.

The increase in the daily average number of persons employed in coal mines in 1939, as compared with 1938, is small, whereas the quantity of coal produced is lower.

Annual returns are now received of the number of persons actually at work and also of persons who should ordinarily have been at work but were absent on a selected day in February of each year. The returns relate only to coal mines. The day to which the returns apply must be the day of a week selected by the Chief Inspector in which there is the largest turn-out of workers. For February 1940, the week selected by me was as follows :—

Bengal, Bihar and Orissa	18th to 24th
Assam, Baluchistan, the Central Provinces and the Punjab .	11th to 17th

Although these returns are for a day in 1940 they are included in this report as they would be more than a year out of date if held over till the submission of the report for the year in which they are made.

The returns for 1940 show that on the day selected 249,383 persons were either at work or were prevented from attending work. This figure is 14,380 less than the average number of persons employed in coal mines during 1939. Three of the important district comparisons are as follows :—

	Average daily attendance.	Attendance on selected day (absentees) included.	Excess over average daily attendance.	Percentage excess.
Jharia Coalfield	88,283	104,996	16,713	18·93
Raniganj Coalfield	68,676	85,820	17,144	24·96
Central Provinces Coalfield . . .	14,869	18,274	3,405	22·90

Some of the percentages of absentees are as follows :—

All mines from which returns were received 7·0; Jharia 3·0; Raniganj 6·8; and the Central Provinces 6·1. It is probable that the reason for the low percentage of absentees in the Jharia coalfield is that a larger proportion of the labour force is resident at or near the mines than in the other areas. A detailed statement compiled from the returns is given in Appendix I, Table No. 1-A.

Figures showing the average output of coal per person employed are given below :—

	Tons of coal per person employed.			
	Underground and in open workings.		Above and below ground.	
	1939.	1937-38.	1939.	1937-38.
British India	177	185	122	128
Bengal and Bihar	179	188	124	130
Assam	159	164	111	115
Baluchistan	50	36	46	35
Central Provinces	164	174	117	123
Orissa	199	180	102	133
Punjab	108	107	68	67

There was a general decrease in the average output of coal per person employed except in Baluchistan, Orissa and the Punjab. In comparing the figures with similar figures in other countries it should be remembered that both men and women are employed in Indian coal mines. In 1938, the output of coal per person employed above and below ground in the United Kingdom was 287 tons. In the same year, *i. e.*, 1938, comparative figures in certain other countries were Japan 207 tons; France 193 tons; Germany 383 tons; and the United States of America 761 tons.

The number of persons employed in metalliferous (including mica, stone, clay and salt) mines was 103,355, which is 1,812 less than the number employed in 1938. 75,913 were men and 27,442 were women.

Bengal, Bihar and Orissa.—The labour supply in the Bengal and Bihar coalfields was generally sufficient throughout the year, and the removal of women from the mines does not appear to have affected the output in any way. There was unfortunately a good deal of labour unrest chiefly in the Jharia coalfield and sporadic strikes of short duration occurred at several collieries. The standard of wages was comparatively high. Increments in wages have been granted at most collieries where such increases were warranted on account of the increase in cost of living caused by the outbreak of war.

The general health of the mining population in the Jharia and Raniganj coalfields was on the whole satisfactory. The death rate per thousand persons was lower in both the Raniganj and Jharia Mining Settlements.

Details of the activities of the Mines Board of Health in the Raniganj and Jharia coalfields are given in Section V of this report, from which it will be seen that the work of the Board is being satisfactorily maintained.

At the beginning of the year in the iron ore mines of Singbhum district there was a large demand for iron ore and large quantities were mined and shipped, but early in the year this shipment was stopped with the result that a number of small mines closed down, only the large companies using their ore in India continued to work, and this was the position up to the end of the year. There was the usual shortage of labour during the harvesting periods. Wages were maintained at the previous year's standard and there was no serious labour trouble. There have been great improvements in housing conditions and facilities for education. An epidemic of meningitis commenced in the Noamundi iron mine in February 1939, and was not finally stamped out until November 1939. Altogether there were 72 cases, of whom 21 died and 51 were cured. Much assistance was received from the Tropical School of Medicine.

At the copper mines worked by the Indian Copper Corporation, Limited, in the Singhbhum district, operations were carried out throughout the year with the exception of a stoppage for two days due to the closing down of the Moubhandar generating plant which supplies the mine with power. This stoppage was due to a slow down strike on the part of the boiler plant operatives. The supply of unskilled labour is far in excess of the demand. There was no outbreak of epidemic disease.

At the mica mines of Chota Nagpur there was a sufficient supply of labour and the rates of wages were normal. Prices of all grades and qualities of mica rose during the year, mainly due to the increased demands from Europe and Japan. There were slight epidemics of cholera in some districts during the year.

Assam.—There was a sufficient supply of labour during the year. Apart from a strike of one day's duration there was no labour trouble. The incidence of malaria was slightly higher than in 1938, but there were no epidemic diseases and there was an improvement in the general health of the labour.

Central Provinces.—In the Pench Valley coalfield there was a shortage of labour from June to October. The rates of wages remained at the same level as in the previous year and the relations between the employers and labour were very good. The general health of the labour was, on the whole, good except for a severe recurrence of malaria during the latter months of the year. Anti-malarial measures were introduced and carried out throughout the year. There was an improvement in housing conditions during the year. Messrs. Shaw Wallace & Company have formed an ambulance division under the St. John Ambulance Association and last year sent three teams to compete in the Provincial competitions.

At the manganese mines in the Central Provinces the demand for manganese in 1939 exceeded that in 1938, probably due to the likelihood of war breaking out. The rise in prices towards the end of the year resulted in the reopening of a large number of small mines. The general health of the labour was good and there were no epidemic diseases during the year.

Punjab.—There was no change in the labour conditions and labour continued to be in excess of requirements. There were no epidemics and the health of the labour continued to be good. The Punjab Portland Cement Company, Limited, employ a full-time sanitary staff to supervise sanitary arrangements. As far as possible all labour with the exception of unskilled labour which comes from the surrounding villages, is accommodated by the company. It is found difficult to obtain fit labour from the surrounding villages and the doctor and his staff have visited a number of malaria cases in the villages during the year.

Madras.—Conditions in the mica trade continued to be good throughout the year. There was a plentiful supply of labour and the relations between employers and labour continued to be good. There were no strikes or epidemics during the year.

In the table on page 6 figures are given of the average daily wages paid in December in each important mining field in India. If the figures are compared with those in last year's Annual Report it will be seen that there was a small general increase in the wages paid to underground miners and to other classes of labour in practically all the coalfields.

Average daily earnings in December 1939.

Mineral Field.	UNDERGROUND.												OPEN WORKINGS.												SURFACE.											
	Overmen and Sirdars. — Foremen and Mates.			Miners.			Loaders.			Skilled Labour.			Unskilled Labour.			Overmen and Sirdars. — Foremen and Mates.			Miners.			Loaders.			Skilled Labour.			Unskilled Labour.			Females.			Clerical and Supervising Staff.			Skilled Labour.			Unskilled Labour.			Females.		
	R	a.	p.	R	a.	p.	R	a.	p.	R	a.	p.	R	a.	p.	R	a.	p.	R	a.	p.	R	a.	p.	R	a.	p.	R	a.	p.	R	a.	p.	R	a.	p.	R	a.	p.	R	a.	p.	R	a.	p.
Jharia Coalfield (Bihar)	1	2	3	0	9	9	0	8	9	0	11	0	0	7	9	0	14	3	0	9	0	0	7	3	0	8	6	0	6	6	0	5	6	1	3	9	0	10	3	0	5	0	0	4	6
Raniganj Coalfield (Bengal)	1	1	0	0	9	0	0	7	9	0	10	0	0	7	0	0	12	3	0	8	6	0	6	3	0	7	6	0	6	3	0	4	3	1	0	3	0	9	6	0	6	3	0	4	0
Giridih Coalfield	2	4	6	0	10	0	0	11	9	0	13	3	0	8	3	..			..			..			0	7	0	..			0	3	0	1	14	0	0	14	0	0	8	0	0	4	0
Assam Coalfield	1	6	6	1	0	6	1	0	3	1	1	3	0	13	6	1	3	6	1	1	0	0	12	9	0	15	0	0	11	9	0	8	0	1	13	6	0	14	0	0	11	6	0	7	9
Punjab Coalfield	1	3	9	0	14	0	0	13	3	0	13	9	0	7	9	..			0	6	0	..			0	9	9	0	6	6	..			0	14	3	0	12	9	0	8	0	0	2	3
Baluchistan Coalfield	1	0	3	0	9	9	0	10	6	0	9	6	0	7	0	..			..			..			..			..			..			..			0	9	3	0	8	9	..		
Pench Valley Coalfield (Central Provinces).	1	2	6	0	12	0	0	7	6	0	10	0	0	7	6	0	15	6	0	10	0	0	6	3	0	8	0	0	5	3	0	3	6	1	1	3	0	9	0	0	6	9	0	4	0
Bihar Mica	0	11	3	0	7	9	..			0	7	9	0	5	6	0	9	6	0	6	9	..			0	8	0	0	4	9	0	2	6	0	14	0	0	6	6	0	5	6	0	4	0
Madras Mica	0	9	6	0	6	3	..			0	5	6	0	4	6	0	7	6	0	5	3	..			0	4	6	0	4	3	0	2	9	0	11	9	0	5	3	0	5	3	0	3	0
Central Provinces Manganese	0	15	9	0	7	0	..			0	10	9	0	6	3	0	14	0	0	5	3	..			0	10	0	0	4	0	0	3	3	1	3	3	0	12	6	0	5	0	0	3	6
Central Provinces Limestone	..			..			..			..			..			0	12	3	0	6	0	..			0	6	0	0	3	0	0	3	0	1	3	9	0	5	0	0	4	0	0	3	0
Bihar Iron	..			..			.			..			..			0	12	9	0	5	3	..			0	11	6	0	5	6	0	4	0	1	6	9	1	1	6	0	5	9	0	4	6
Punjab Salt	6	1	0	2	7	6	..			1	1	9	0	11	3	..			..			..			..			..			..			0	13	9	0	12	3	0	7	3	..		
Bihar China clay	..			..			..			..			..			0	6	0	0	3	0	..			0	4	3	0	3	3	0	2	6	1	3	3	0	5	0	0	3	6	0	2	9
Punjab Slate	..			..			..			..			..			0	9	0	0	7	0	..			0	5	9	0	4	6	..			0	13	0	0	11	0	0	6	6	..		
United Provinces Stone	..			..			..			..			..			0	7	6	0	11	0	..			0	5	6	0	4	0	0	3	0	0	15	9	0	3	3	0	11	9	0	2	3

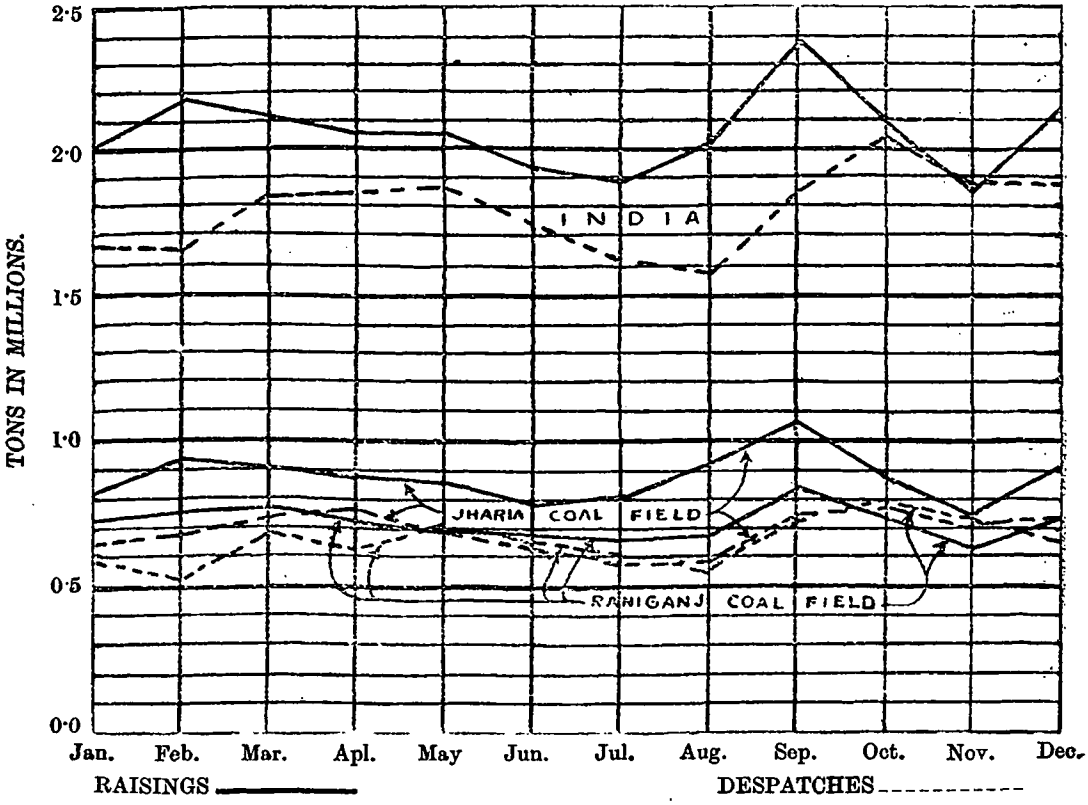
Section II.—Output of Minerals.

Output.—The statement given below shows the output of coal in the various provinces in British India during the years 1938 and 1939.

	Output in tons.	
	1939.	1938.
Assam	274,528	267,300
Baluchistan	16,213	14,388
Bengal	7,591,495	7,745,372
Bihar	14,784,946	15,362,604
Central Provinces	1,742,831	1,658,626
N.-W. F. Province	8	..
Orissa	58,687	44,425
Punjab	194,080	184,028
Total	24,662,788	25,276,743

The total output in 1939 was 24,662,788 tons of a declared value of Rs. 8,69,62,407. The decrease in the output was 613,955 tons, *i.e.*, 2·43 per cent. and the decrease in the value of Rs. 76,65,458, *i.e.*, 8·10 per cent. The opening stocks in 1939 were 2,092,337 tons and the closing stocks 2,377,881 tons. In the charts which appear below the raisings and despatches of coal are shown month by month :—

RAISINGS AND DESPATCHES OF COAL MONTH BY MONTH IN 1939.



It will be seen from the chart that, as usual, the output was highest in the months of February and September of the year. The fall of output in October and November was greater than usual due to the harvesting season.

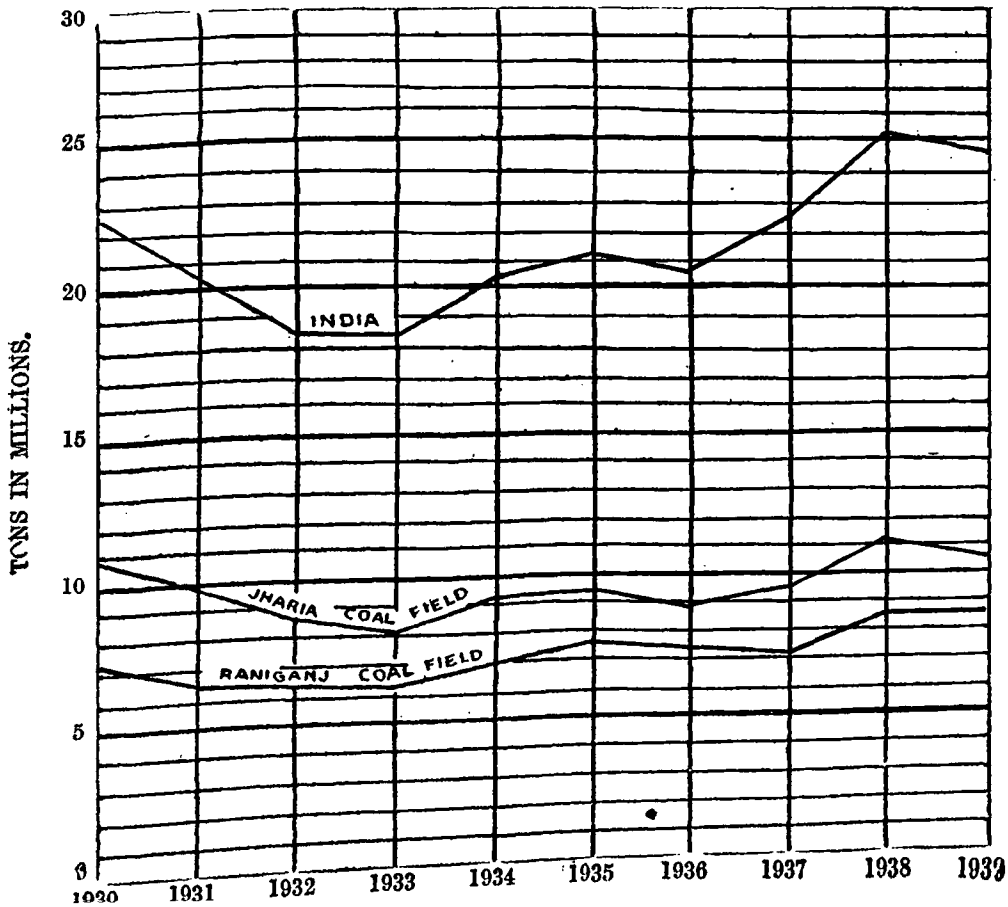
The output in Bihar decreased by 577,658 tons; there was an increase of 14,262 tons in the province of Orissa; and in Bengal there was a decrease of 153,877 tons. In the Central Provinces the output increased from 1,658,626 tons to 1,742,831 tons. There were increases of 10,052 tons in the Punjab, and 1,825 tons in Baluchistan. There was also an increase of 7,228 tons in Assam. In the North West Frontier Province 8 tons of coal were produced.

The figures of output for the principal coalfields are as follows :—

Coalfield.	1939.	1938.	Percentage increase + or decrease —.
Jharia	10,529,159	11,144,462	—5·52
Raniganj	8,542,506	8,650,920	—1·25
Bokaro	1,983,564	2,007,016	—1·67
Giridih	695,879	636,371	+9·35
Karanpura	566,885	625,914	—9·43
Pench Valley . . .	1,415,562	1,369,208	+3·38
Assam	274,528	267,300	+2·70

The output of the Jharia coalfield decreased by about 5½ per cent., the Raniganj coalfield decreased by about 1¼ per cent., the Karanpura coalfield decreased by about 9⅔ per cent., and the output of the Assam coalfield increased by about 2¾ per cent. There was an increase in the Pench Valley coalfield of the Central Provinces of about 3⅓ per cent. and in the Bokaro coalfield a decrease of 1½ per cent. In the Giridih coalfield the output rose by over 9⅓ per cent. The accompanying chart shows the variation of the output of coal during the period 1930-1939.

CHART SHOWING OUTPUT OF COAL DURING THE PERIOD 1930—1939.



Despatches.—The despatches of coal were 21,431,990 tons, and 1,519,400 tons, or 6·16 per cent. of the raisings were consumed on the collieries. The quantity of coal used for coking at the collieries was 1,425,854 tons, and 895,958 tons of soft coke and 110,742 tons of hard coke were made. There was a decrease, *i.e.*, 0·55 per cent. in the quantity of soft coke manufactured at the collieries for domestic consumption. The quantity of hard coke made at the collieries is small. Most of the hard coke is made at coke-making plants which do not come under the Mines Act, and 1,639,976 tons of coal were despatched to coke-making plants of this kind in 1939. The quantity is 12,899 tons more than in 1938. Analyses of the figures relating to the output of coal and the manufacture of coke will be found in Appendix I, Table No. 3.

The despatches of coal for the year were more than those for 1938 by 375,623 tons. The stocks of coal at the collieries at the end of the year were more than at the beginning.

The following figures giving the average value per ton of coal put into wagons in various districts may be of interest:—Assam, Rs. 8 annas 6·8; Baluchistan, Rs. 6 annas 9·6; Bengal, Rs. 3 annas 12·3; Bihar (Jharia coal-field), Rs. 3 annas 3·3; Central Provinces, Rs. 3 annas 10·4; Orissa, Rs. 3 annas 0·4; North-West Frontier Province, Rs. 5 annas 4·0; and the Punjab, Rs. 5 annas 0·4. There was an all-round decrease in the average value per ton of coal. In Assam it was Re. 1 annas 3·7; in Baluchistan, annas 2·9; in Bengal, annas 10·6; in Bihar, Re. 1 annas 6·3; in the Central Provinces, annas 4·8; and the Punjab, annas 12·2, respectively.

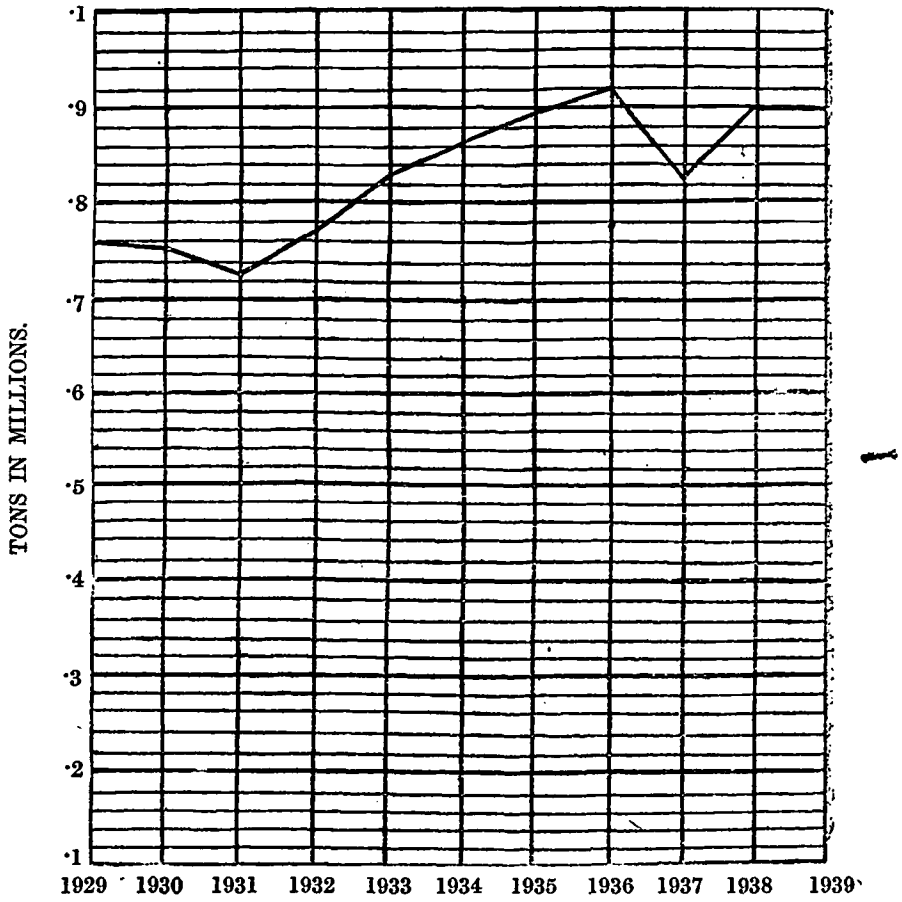
Trade Conditions.—The market opened firm at the beginning of the year and prices were steady until the end of May, when the recurring annual wagon difficulty ceased and supplies were made in full against colliery indents. Demand then shewed a considerable falling off, and in August prices had fallen considerably. Stocks began to accumulate at collieries and some concern was felt at the downward trend of prices. The outbreak of war however resulted in a sustained demand for coal and at the end of the year prices were more or less on the same level as in January, with stocks being rapidly cleared. This demand taxed the capacity of the railways to handle the traffic, with the result that from September on the East Indian Railway and from November on the Bengal Nagpur Railway wagon supplies were severely restricted for public loading, whereas under normal conditions such restrictions do not arise until the end of the year.

The export demand, particularly to the Far East continued to shew the improvement noted in the previous year, and although between September and November coal freights shewed an appreciable increase demand continued to be brisk.

Coal Grading Board and Soft Coke Cess Committee.—During the year the Coal Grading Board continued to maintain the same standard of good work as in previous years and the quality of export coal was generally satisfactory. 2,628,532 tons of coal were exported under the supervision of the Board during the year, as against 2,206,841 tons in the previous year, or an increase of 421, 691 tons.

The Soft Coke Cess Committee continued to work on the same lines as in former years. Propaganda for popularising soft coke as domestic fuel was carried out vigorously. The arrangement for the inspection of loading soft coke wagons at the collieries was maintained and experiments for the improvement in the quality of soft coke were continued. During the year the prices of soft coke remained high. Approximately 888,982 tons of soft coke were despatched from the coalfields during the year, as compared with 889,671 tons during the year 1938. Out of the output for 1939, 855,915 tons were despatched from mines in the Jharia coalfield. The accompanying graph shows the development of the soft coke industry during the last ten years :—

DESPATCHES OF SOFT COKE FROM 1929 TO 1939.



Use of Electricity both at Coal Mines and at other mines.—The number of coal mines using electrical energy was 144, as compared with 136 in 1938, and 124 in 1937, and the aggregate horse-power employed at coal mines increased from 98,077 to 104,000, *i.e.*, by 6·05 per cent. The increase is due chiefly to the increased horse-power of motors installed in the Raniganj coalfield. During the year electrical plant was installed and brought into operation in seven additional mines, and of mines using electricity one was re-opened

Electricity was used in 22 metalliferous mines and the aggregate horse-power employed was 8,107, as against 7,751, in the previous year.

Statistics of the electrical plant in use at mines in the various provinces of British India and in certain mine fields are contained in Appendix I, Table Nos. 7, 8 and 9.

During the year there were three serious and two fatal accidents due to electricity; one fatal accident occurred below ground and the other one on a surface transmission line.

Explosives.—During the year 3,500,376 lb. of gunpowder, 81,339 lb. of high explosives, and 260,403 lb. of "permitted" explosives were used at coal mines. These figures compare with 3,479,883 lb. of gunpowder, 93,788 lb. of high explosives, and 290,131 lb. of "permitted" explosives used in 1938. In addition, 79,869 lb. of liquid oxygen explosives were used. These explosives were used in quarries in the Bokaro coalfield. A statement of the kind and quantity of explosives used during the year in the different kinds of mines under the Act is given in Appendix I, Table No. 12.

Coal Cutting Machines.—The number of coal cutting machines used was 203, as compared with 186 in 1938, and 140 in 1937. All the machines were worked by electricity. 56 machines were at work in the Jharia coalfield, 130 machines in the Raniganj coalfield, 2 machines in Karanpura coalfield, 1 machine in Giridih coalfield, 2 machines in Bokaro coalfield, and 12 machines in the Central Provinces and Berar. During the year there has been an increase of 15 machines in the Raniganj coalfield. Coal cutting machines were in use in 72 mines against 66 in 1938, and 50 in 1937. Besides coal cutting machines 6 pneumatic picks worked by compressed air were in use in one mine. The total area undercut was 10,816,032 square feet, as compared with 8,827,200 square feet undercut in 1938. It is evident that there has been a steady increase in recent years in the getting of coal by mechanical means.

Mechanical Ventilators.—In Appendix I, Table No. 10, particulars are given of the number of mechanical ventilators in use in coal mines under the Act. In 1939, 139 mechanical ventilators were in use, the number being 128 in the previous year.

Safety Lamps.—In Appendix I, Table No. 11, particulars are given of the number of safety lamps in use in coal mines under the Act. 47,640 safety lamps were in use in 1939, as compared with 46,520 in 1938.

Iron Ore.

The production of iron ore was 1,543,934 tons, valued at Rs. 29,34,779, as compared with 1,421,090 tons, valued at Rs. 26,89,996 in 1938.

Manganese Ore.

There was a decrease of 97,321 tons in the output of manganese ore, the figures of production being 669,020 tons, valued at Rs. 98,06,630, as

compared with 766,341 tons, valued at Rs. 1,23,81,646 in 1938. The average reported value per ton of manganese ore produced fell from Rs. 16·16 in 1938 to Rs. 14·66 in 1939. The corresponding value in 1937 was Rs. 15·13. The Central Provinces Manganese Ore Company, Limited, despatched a total of 540,598 tons as follows :—235,591 tons to Calcutta ; 53,996 tons to Bombay ; 210,647 tons to Vizagapatam ; and 40,364 tons of other sales on f. o. r. basis. The quantity despatched in 1938 was 362,588 tons, so that the increase in despatches in 1939 was 178,010 tons. The average f. o. b. price was 10·52 annas per unit, as compared with 10·66 annas per unit in 1938.

Chromite Ore.

The production of chromite ore was 18,428 tons, valued at Rs. 3,08,648, as compared with 27,086 tons, valued at Rs. 4,25,942 in 1938.

Copper Ore.

The output of copper ore was 360,216 tons, valued at Rs. 47,87,540, as compared with 288,076 tons, valued at Rs. 32,40,640 in 1938. The whole of the production came from the mines belonging to the Indian Copper Corporation, Limited, in the Singhbhum district in Bihar. The production of refined copper amounted to 6,535 tons, as compared with 5,330 tons in 1938.

Mica.

The quantity of mica consigned was 104,575 cwt., valued at Rs. 49,49,848, as compared with 101,633 cwt., valued at Rs. 40,89,448 in 1938. The output of dressed mica in 1939 was 110,714 cwt., as compared with 108,835 cwt. in 1938. In addition, 13,023 cwt. of waste mica fit for " splittings " valued at Rs. 62,196, were consigned from Nellore district, 352 cwt., valued at Rs. 685, from Salem district, Madras Presidency, and 937 cwt. valued at Rs. 277 from Ajmer-Merwara district in Rajputana. The output of this kind of mica was 14,926 cwt.

The quantities of mica and " splittings " shipped in 1938 and 1939 were as follows :—

	Cwt.	Rs.
1938	79,621	95,85,168
1939	94,799	126,64,919

In addition 72,235 cwt. of " pattern cut " and scrap mica, valued at Rs. 3,05,191, were shipped, as compared with 63,161 cwt., valued at Rs. 4,00,019 in 1938.

Rock-Salt.

The production of rock-salt was 165,950 tons, as compared with 164,674 tons in the previous year.

Limestone.

The reported production of limestone was 1,515,690 tons, valued at Rs. 13,62,159 as compared with 1,582,058 tons, valued at Rs. 17,09,905 in 1938.

Stone.

Returns were submitted by the owners of one hundred and twenty-one stone mines, and the figures of production were as follows :—1,702,304 tons of igneous rock ; 30,888 tons of sandstone ; 53,285 tons of gravel ; and 15,898 tons of murrum. The total production was 1,802,375 tons, as compared with 1,566,688 tons in 1938.

Clays.

From the thirty-three clay mines from which figures were obtained 53,862 tons of fire-clay, 14,026 tons of China-clay and 77,355 tons of ordinary clay were produced.

Other Minerals.

The production of other minerals were as follows :—5,527 tons of bauxite, valued at Rs. 9,374 ; 8,988 tons of slate, valued at Rs. 1,99,947 ; 29,903 tons of magnesite, valued at Rs. 1,79,079 ; 18,030 tons of gypsum, valued at Rs. 85,665, 6,216 tons of barytes, valued at Rs. 44,944 ; 2,774 tons of steatite, valued at Rs. 14,049 ; 258 tons of ochre, valued at Rs. 2,635 ; 293 tons of felspar, valued at Rs. 2,392 ; 182 tons of apatite, valued at Rs. 910 ; and 773 tons of kyanite, valued at Rs. 11,523. Small quantities of asbestos, beryl, corundum, garnet, graphite and fuller's earth were also produced.

SECTION III.—ACCIDENTS.

During the year 1939, at mines regulated by the Indian Mines Act, 1923, there were 266 fatal accidents which is 18 more than in 1938, and 56 more than the average number in the preceding five years.

In addition to the fatal accidents there were 1,380 serious accidents, involving injuries to 1,410 persons, as compared with 1,165 serious accidents, involving injuries to 1,196 persons in the previous year. The so-called " serious " accidents reported are those in which an injury has been sustained which involves, or in all probability will involve, the permanent loss of or injury to the sight or hearing or the fracture of any limb or the enforced absence of the injured person from work for a period exceeding twenty days. Two hundred and eighty-six persons were killed and 1,447 persons were seriously injured. The latter figure includes 37 persons injured in fatal accidents. The number of persons killed was 3 more than in 1938. 278 persons killed were men and 8 were women. In one case 3 lives and in eighteen cases 2 lives were lost.

The proportion of accidents which occurred to men underground, in open workings, and on the surface and to women in open workings and on the surface were as follows :—

—	No. of fatal accidents.	No. of men killed.	No. of women killed.	Death rate per 1,000 persons employed.		No. of serious accidents.	No. of men injured.	No. of women injured.	Serious injury rate per 1,000 persons employed.	
				Men.	Women.				Men.	Women.
Underground	223	242	..	1·65	..	1,005	1,035	..	7·05	..
Open workings	26	23	3	0·46	0·11	90	72	20	1·43	0·75
Surface. .	17	13	5	0·23	0·21	285	244	39	4·22	1·62

There was a decrease in the death rate of men employed underground and on the surface and an increase in open workings. With respect to women there was an increase in the death rate in open workings and on the surface. The causes of the fatal accidents have been classified as follows :—

	No. of fatal accidents.	Percentage of total number of fatal accidents.
Misadventure	209	78·57
Fault of deceased	22	8·27
Fault of fellow workmen . . .	6	2·26
Fault of subordinate officials . .	16	6·01
Fault of management . . .	10	3·76
Faulty material	3	1·13
Total .	266	100·00

There was an increase of 3 in the number of persons killed during 1939, as compared with 1938.

I have analysed the serious accidents and find that out of the total of 1,447 persons seriously injured 2 were permanently and totally disabled; 56 were permanently partially disabled, and 1,389 were only temporarily disabled.

In addition, it was reported that 10,584 persons received minor injuries which necessitated the enforced absence from work for a period exceeding forty-eight hours.

Explosions and ignition of fire-damp and coal-dust.—There was one serious accident by an ignition of fire-damp.

Falls of roof and sides.—Falls of roof and sides caused 164 fatal accidents and 306 serious accidents. As compared with the figures under this head in

the previous year the total number of accidents increased from 386 to 470; the number of persons killed increased from 166 to 180; and the number of persons seriously injured increased from 270 to 314. In three cases two lives were lost in depillaring areas; also in five cases two lives were lost in galleries by falls of roof. The accidents by falls of sides include one in which two persons were killed in open workings; in two cases two lives were lost in depillaring areas; and in two other cases two lives were lost in galleries.

In Shafts.—There were 14 fatal accidents and 34 serious accidents in shafts, as compared with 15 fatal accidents and 33 serious accidents in the previous year.

Suffocation by gases.—There was one fatal accident by suffocation by gases.

Explosives.—There were 16 fatal accidents and 28 serious accidents caused by explosives. In the previous year the figures were 10 and 38, respectively.

Haulage.—There were 38 fatal accidents and 280 serious accidents on haulage roads. The accidents due to haulage have been classified as follows:—

Classification.	Fatal.	Serious.	Total.
Haulage rope breaking	..	1	1
Coupling chains and hooks breaking	2	..	2
Drawbars breaking	1	..	1
Couplings becoming detached	10	3	13
Riding on sets (authorised)	1	11	12
Riding on sets (unauthorised)	3	2	5
Allowing tubs to run uncontrolled	3	11	14
While hand-tramming tubs	1	59	60
While guiding tubs on a curve	1	24	25
Following derailment or re-railing tubs	3	35	38
While coupling or uncoupling	2	22	24
While resting on or loitering about haulage roads or tramming levels	1	20	21
Crushed against tubs, sides of roadways, doors, etc.	2	13	15
While spragging moving tubs	2	12	14
Unclassified	6	67	73
Total	38	280	318

The number of accidents under this heading shows a regrettable increase in the number of serious accidents with the preceding year. I give below a table showing the fatal and serious accidents on haulage roads during the last five years:—

	Fatal.	Serious.
1935	20	161
1936	24	189
1937	32	218
1938	40	257
1939	38	280

As pointed out in my Annual Report for last year, there has been a steady increase in the number of fatal and serious accidents, and as indicated in previous reports many of these accidents could have been prevented by better supervision; suitable haulage roads and gear and greater care on the part of persons employed on haulage roads.

There has been a decided reduction in the number of accidents under the first three headings in the classification of haulage accidents, there being 4 in 1939, as compared with 6 in 1938. As these types of accidents are often attended with serious results this is a very welcome improvement.

There was a regrettable increase in the accidents due to couplings becoming detached. Out of 10 fatal accidents under this heading, 8 resulted from the use of defective types of couplings. It is, therefore, evident that a number of these accidents could have been avoided by using suitable types of couplings, as recommended in my Annual Report for 1938, and I trust that mine officials will give this matter their very serious attention with a view to reducing this type of accident.

Although the number of fatal accidents resulting from set riding was the same as in the preceding year, there was a reduction in the serious accidents from this cause. Three out of the four fatal accidents under this heading occurred due to unauthorised riding on sets which could have been avoided by stricter supervision on the part of the subordinate officials.

There was an appreciable decrease in the number of accidents, both fatal and serious, resulting from tubs being allowed to run uncontrolled. In my Annual Report for 1938 a sketch of an interlocked stop-block and runaway switch was given and it is hoped that the use of this appliance at the top of haulage inclines will be further extended, and as a result accidents under this heading be reduced.

There was the same number of accidents from hand tramming during 1939 as in 1938. A large number of these accidents was caused by hand-trammed tubs overtaking and injuring persons pushing tubs in front, If precautions are taken to keep the tubs under control, specially where gradients are undulating, and by the trammers exercising greater care, this type of accident will, to a large extent, be avoided.

There was a considerable increase in the number of accidents from guiding tubs on curves, there being 25 in 1939 and 11 in 1938. Most of these accidents were due to defective tracks. If the tracks at curves are properly laid and fitted with check and guide rails, and a sufficient number of properly spaced pulleys are fixed on curves, this type of accident will be greatly minimised.

The accidents following derailments and re-railing tubs reveal an appreciable improvement, there being 38 accidents, as compared with 63 in the previous year. As derailments are chiefly caused by badly laid tracks, specially at crossings and the junction of haulage roads, badly designed curves, dirty roads and badly maintained tubs, it is obvious that a great improvement could be effected by devoting more attention to these matters.

The number of accidents to persons while resting on or loitering about the haulage roads and tramming levels increased from 18 to 21. Many of these accidents are avoidable by adopting precautions to prevent persons inadvertently going on to haulage roads by the use of gates on working levels where persons are employed. Stricter supervision on the part of the subordinate officials by their insisting that work-persons shall not

proceed beyond a gate or fence as referred to above would assist considerably in reducing the number of this type of accident.

The accidents under the heading " unclassified " have considerably increased. Several serious accidents under this heading were caused at the time of cleaning haulage roads or friction rollers when the rope was in motion. Obviously such work should be done when the rope is not in motion.

Underground Machinery.—Two fatal and 28 serious accidents were caused by underground machinery.

Sundries Underground.—Fifteen fatal accidents and 417 serious accidents were due to miscellaneous causes underground.

Surface Machinery.—Two fatal accidents and 21 serious accidents were caused by surface machinery.

Surface Railways and Tramways.—Eleven fatal accidents and 156 serious accidents took place on surface railways and tramways.

Electricity.—There were one fatal accident and 3 serious accidents attributable to the use of electricity.

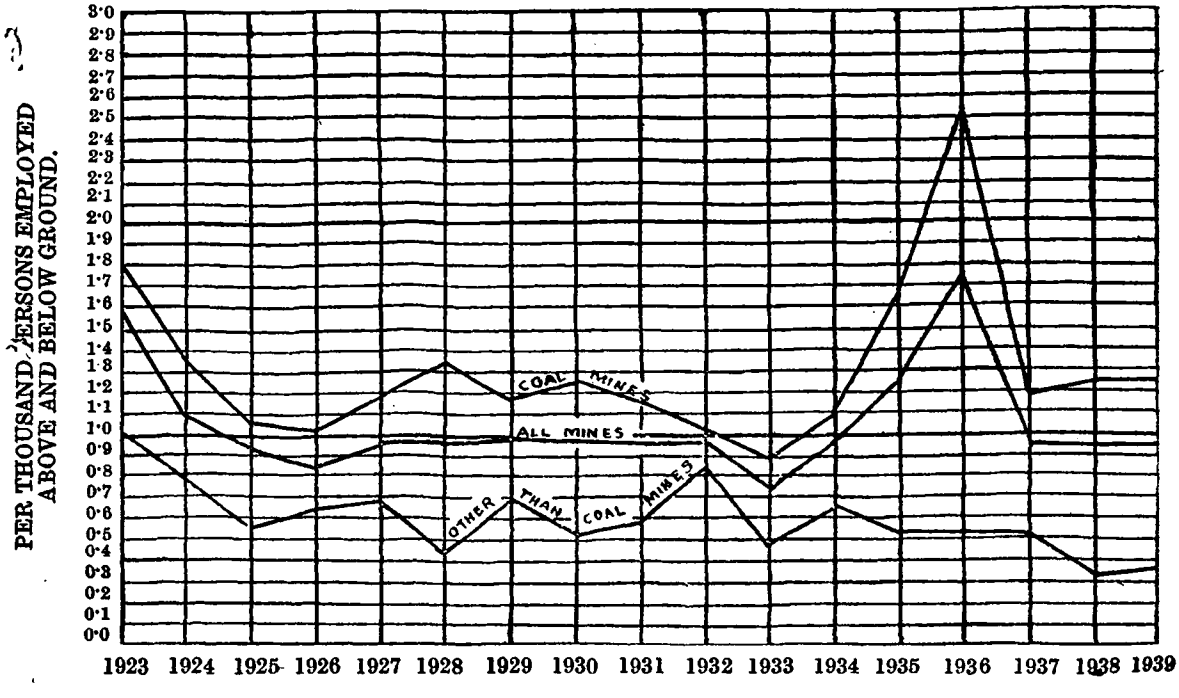
Miscellaneous on the Surface.—Two fatal accidents and 107 serious accidents of this kind took place on the surface.

Accidents excluded from the statistics.—Sixteen accidents causing 18 deaths and injury to one person were excluded from the statistics for reasons which are given in Appendix II.

Death rate.—The death rate per thousand persons employed above and below ground was 0·94 which was more than the rates in 1937 and 1938. The average rate for the preceding five years was 1·15. At coal mines the rate was 1·23, as compared with 1·23 in 1938. At mines other than coal mines the rate was 0·36, as compared with 0·33 in 1938.

The chart below shows graphically the variations in the death rate during the period 1923-39 :—

CHART SHOWING THE DEATH RATE
FROM ACCIDENTS DURING THE PERIOD 1923-1939.



From the above it will be seen that except for coal mines the death rate has risen. The high death rate in 1936 was due chiefly to an explosion in a coal mine which caused the loss of 209 lives.

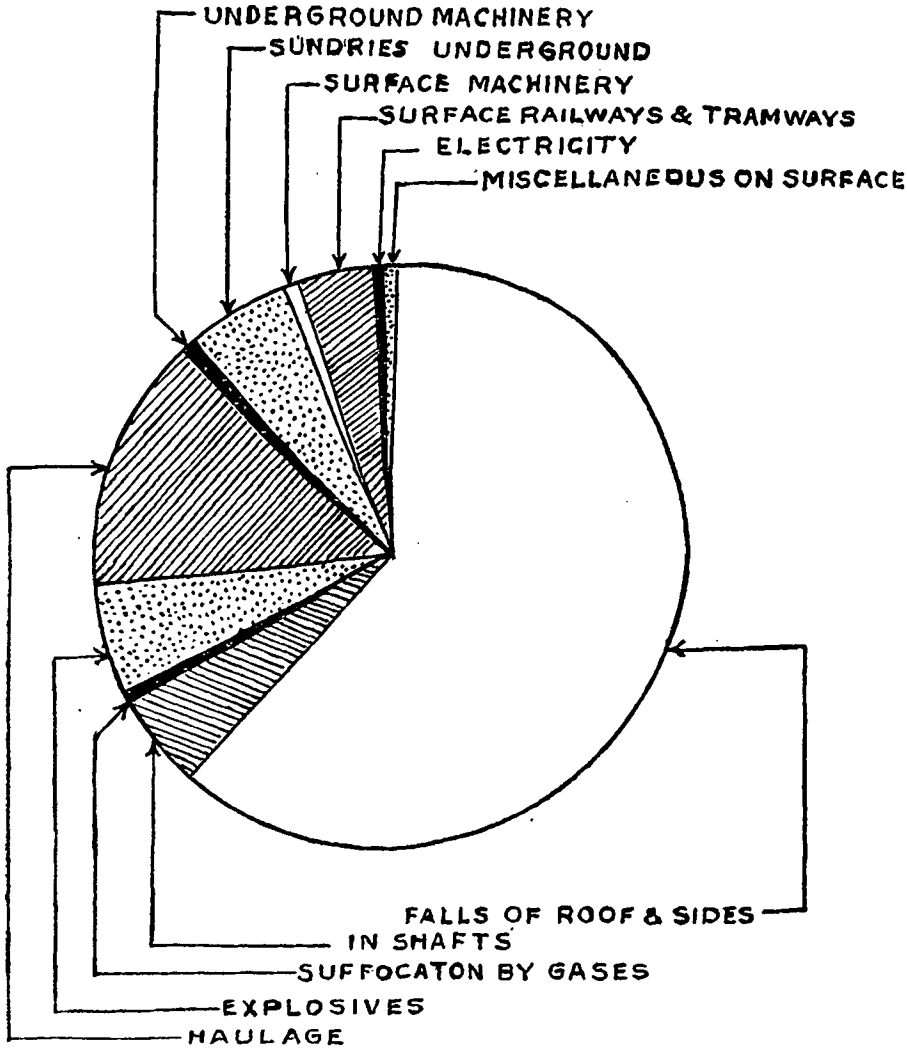
The death rate per million tons raised at coal mines was 11·76, while that of the preceding five years was 11·90.

Deaths occurring in each class of mines were as follows:—249 in coal mines; 1 in an iron ore mine; 13 in mica mines; 5 in limestone mines; 4 in stone mines; 1 in a copper mine; 2 in chromite ore mines; 2 in salt mines; 7 in manganese mines; 1 in a slate mine; and 1 in a fire-clay mine.

Ninety-five persons lost their lives by falls of roof; 85 by falls of sides; 14 in shafts; 17 by explosives; 1 by suffocation by gases; 40 by haulage; 1 by electricity; 18 by other accidents underground; and 15 on the surface.

The accompanying chart shows the relative importance of the various causes of accidents in coal mines during 1939.

CHART SHOWING
DISTRIBUTION OF CAUSES OF PERSONS KILLED IN AND ABOUT COAL MINES IN THE YEAR 1939.



A list of the fatal accidents, appears in Appendix II, Table I. where each is briefly described. The details of certain accidents are reported at greater length as follows :—

FALLS OF ROOF.

No. 40.—The Equitable Coal Company, Limited's Bejdih coal mine.

(Two persons killed.)

This accident occurred in a depillaring section of the Dishergarh seam, 14 feet thick, and lying at a depth of 1,500 feet.

A gang of six miners, including deceased was employed in cutting and loading coal from a gallery being driven to split a pillar, and on completing their work were walking along an adjoining level, when a " bump " occurred causing a fall of several tons of roof coal, which resulted in the death of two persons. This fall took place more than 200 feet from the edge of the goaf. Chocks and props had been set in the level where the fall occurred but a number of props were knocked out by the fallen roof coal.

My remarks relating to " bumps " in connection with another accident by a fall of side at Dhemo Main mine are applicable to this and other similar accidents.

No. 74.—The Eastern Coal Company, Limited's Amlabad coal mine.

(Two persons killed.)

This accident occurred while machine cut coal was being loaded in a gallery, 7 feet high, and the place of accident is indicated in Plan No. 1.

The Inspector of Mines, No. 1 Circle, who enquired into this accident stated that a gang of eight loaders went to work in the place of accident, and after shots were fired on the day previous to the accident, the " faces " were dressed. The " faces " were also again dressed on day of accident. About half an hour before the accident the sirdar inspected the place, tested the roof and found it safe. The " slip " at the right hand side of the gallery was revealed and that at the left side had not been exposed. The " slip " at the right hand side was running almost parallel with the centre line of the gallery and several sprags had been set to the side. The eight loaders were loading coal when they heard a cracking sound in the roof and small stuff falling. They started running out of the gallery, when a mass of coal, $20' \times 9' \times 3'$, fell from between two converging " slips " in the roof, killing the two deceased instantly. The fall revealed another slip just inside the left side of the gallery which converged in the roof towards the other " slip ". The under-cutting and blasting in the new rise gallery on the left side as shown on the plan was a factor which contributed to the fall.

The Inspector of Mines, on commenting on this accident, remarks that " where a ' slip ' running parallel to or almost parallel to a side of a gallery has been revealed it is always advisable to take precautionary measures by erecting a row of props to secure the roof even when the roof sounds secure. In the past many such accidents have occurred in India and this precautionary measure under similar circumstances is strongly recommended ".

FALLS OF SIDE.

No. 151.—The Hazaribagh Mica Mining Company, Limited's Sarlaiya (prospecting pit) mica mine.

(One person killed.)

This accident occurred in a shallow prospecting pit, 7′×5′×6′ deep which had been stopped because of the bad quality of the mica. On day of accident it appears that deceased and his companion had worked in the pit for several hours contrary to the orders of the manager, when a mass of side fell and deceased sustained fatal injuries.

A number of accidents have occurred in the past due to persons working in old abandoned prospecting pits, and it is considered that these shallow excavations should be filled in, not only to prevent illicit working but also to avoid accidents due to persons inadvertently falling into these pits.

No. 153.—The Dhemo Main Collieries Limited's Dhemo Main coal mine.

(Two persons killed and one injured.)

This accident occurred during depillaring operations in the Dishergarh seam which is 13′—6″ thick and lies at a depth of 1,800 feet. Plan No. 2 indicates the place of accident.

The area of extraction measured about 3,800 feet on the strike and 500 feet on the dip. During the second relay on the day of accident a gang of miners was employed to drive a "split" gallery in the pillar "P". At about 11 p. m. there was a severe "bump" which caused large masses of coal to fall from the sides of pillars as shown in the plan, resulting in the death of two persons and serious injuries to another. Great clouds of coal-dust were raised in the air and although the miners had electric lights they could not see because the dust was so dense.

During the year several accidents due to "bumps" have occurred at this and other mines working the Dishergarh seam at great depths. Above the Dishergarh seam there is usually a few feet of shale and above this shale is a hard sandstone of considerable thickness. Generally, it is found that "bumps" are likely to occur when the "cover" is in the region of 1,000 feet and over, and where there is a strong stratum, *e.g.*, sandstone immediately above or within a few feet of the coal seam. When these strong massive strata begin to break up after large areas of coal have been extracted, depending on the depth of the seam, "bumps" are likely to occur, producing what might be called "shock waves", which are usually transmitted over considerable distances and result in extensive falls of side and roof. Gas may also be liberated in gassy mines.

"Bumps" should be distinguished from ordinary "weighting" due to pressure being thrown on to the working "face" or the pillars in the vicinity during depillaring operations, and which might result in minor falls of roof and sides. "Bumps" as previously pointed out are caused by the breaking up of strong massive super-incumbent strata at considerable depths and the effects of "bumps" are transmitted over large areas and are sometimes so violent as to raise dense clouds of coal-dust and extinguish flame safety

lamps. As the area of extraction increases and the stage approaches when a " break " of the main roof is likely to take place the frequency and severity of " bumps " are likely to increase.

To mitigate the effects of " bumps " conditions at each mine should be carefully studied and precautions taken accordingly. For instance, if the roof immediately above the coal is sound it would be unsound practice to leave roof coal which would be likely to fall and endanger workers when any " bumps " occur. On the other hand, if the immediate roof is unsound and it is necessary to leave some roof coal as a support, then this roof coal should be adequately supported by " chocks " set at short intervals to prevent roof coal collapsing if a " bump " with the accompanying " shock waves " should occur. It is also essential, as far as practicable, to avoid leaving small pillars or " stooks " behind in goaves so that the main roof may be allowed to settle down evenly. A consideration of the direction of the working " faces " in conjunction with " cleavages " in the roof is of importance, and in some cases a " diagonal " or an " inclined " face has been found to be the most suitable. The management of each mine, where " bumps " are likely to occur, should consider the prevailing conditions at their particular mine and arrange the direction of the working " faces " accordingly.

Explosives.

No. 188.—The Sone Valley Portland Cement Company, Limited's Bhangia Gursote limestone mine.

(One person killed.)

This accident occurred in a limestone quarry and it was the practice to conduct blasting operations during the " rest interval ", *i.e.*, from 11 a.m. to 1 p.m., under the direct supervision of the supervising staff.

On day of accident all the work-persons retired, as usual, to their places of shelter at 11 a.m., as blasting operations were about to be commenced. The shot-firer charged three holes in one of the " benches " of the quarry, and the deceased quarry-assistant and the mining sirdar were standing at distances of 280 feet and 300 feet, respectively, from the place where the shots were to be fired. After giving proper warning the shot-firer ignited the shots and proceeded to his place of shelter. Unfortunately, deceased was standing directly exposed to the shots and when the third shot exploded it projected a piece of stone which struck him, inflicting serious injuries to which he succumbed the next day. Deceased was an experienced assistant and it was an error of judgment on his part to stand so near to the place where the shots were fired. It is considered that he should not have remained within 600 feet from the point of blasting without taking proper shelter. If it is not possible for the persons supervising blasting operations to retreat to a place not less than 600 feet from the point of blasting, it is very necessary that they should take shelter behind a barricade or some other suitable structure.

In the past a number of accidents have occurred by pieces of stone projected from shot-holes during blasting operations in open quarries, and persons have been killed or injured up to a distance of nearly 600 feet. It is

essential, therefore, that shot-firers and supervisors should not remain within a distance of 600 feet where shots are fired unless suitable shelters for their protection are provided.

HAULAGE.

No. 203.—Kumar Sarat Kumar Roy's Isabella coal mine.

(One person killed.)

This accident occurred at the end of a haulage road where tubs were loaded from a depillaring area, and the gradient varied from about 1 in 10 to about 1 in 15. At the time of the enquiry into this accident it was disclosed that while deceased was crossing the bottom of the haulage line he was struck and fatally injured by a runaway empty tub. Nine tubs were being lowered on the haulage road, and where the gradient decreased from 1 in 10 to about 1 in 15, two hookmen had to jerk the rope in order to help the tubs to pull the rope out to the end of the haulage line. While they were doing this, the first tub of the set became uncoupled and ran amain.

This enquiry revealed that the type of coupling in use was unsatisfactory and the drag was also unsuitable. After the accident a suitable type of coupling and an improved type of drag were introduced. In my Annual Report for 1938, suitable types of couplings and an improved type of drag were illustrated, and I strongly recommend their use in those mines where they are not already being used.

It is also considered that on undulating gradients where there is any likelihood of tubs becoming uncoupled " safety chains " or ropes should be used on the set so that in the event of one or more tubs becoming detached they are not free to run away. This precautionary measure is being taken at a number of mines.

No. 210.—The Jinagora (East Bararee) Colliery Company, Limited's Jinagora (B. Section) coal mine.

(Two persons killed.)

This accident occurred on a haulage incline which passed through an old quarry and the gradient of the road varied from 1 in 4 to 1 in 8. An enquiry into this accident disclosed that when a set of five empty tubs was being lowered down the haulage incline, the two front tubs became uncoupled from the set and ran uncontrolled for a distance of about 200 feet and struck the two deceased. The tubs were of the side tipping type and were coupled together by means of lashing chains round the under-frames. One of these lashing chains had become unhooked and had thus allowed the two tubs to run amain. It appeared that the tubs became uncoupled at a point where the haulage line was fouled by coal lying at the side of the line where a tub had previously overturned. After the accident a suitable type of coupling was introduced. This accident also points to the necessity of keeping haulage roads clean and free from obstruction.

My remarks in connection with another accident caused by a coupling becoming detached are also applicable to this accident.

Sundries Underground.

No. 249.—The Aldih Coal Company, Limited's Methani coal mine.

(Two persons killed.)

This accident was due to brattice cloth being ignited from an unknown source in an underground gallery and the two deceased sustained injuries to which they succumbed. Electric and flame safety lamps were used throughout the mine. Plan No. 3 indicates the place of accident. When the Inspector of Mines, No. 2 Circle, investigated this occurrence it was revealed that about half-an-hour before the accident the " face " of No. 25 level had been under-cut by a coal cutting machine, which was subsequently placed at the point " M ". Later on the two injured persons were drilling shot holes in the roof coal at " S ", when suddenly a portion of the brattice cloth, indicated by the red dotted line, caught fire and smoke began to fill the level gallery. According to the injured persons they had drilled three holes and where drilling the fourth at " S " when there was a flash from the hole which severely burnt them. This version of the cause of the accident is referred to later.

Immediately after the accident the manager found the level filled with smoke, and he crawled a distance of about 100 feet along the level, when he saw some brattice cloth further in bye still smouldering. The manager erected brattice cloth in order to restore the ventilation and a little later he was able to examine the site of the fire and the end of the gallery where the injured men had been working. The manager stated that the fire had obviously started about 50 feet from the " face " of the gallery and at the point where the coal cutting machine had been placed just before the accident. He made tests for gas all along the level but no trace of gas was found. The brattice cloth which extended up to within 4 feet of the back of the gallery was not burnt for a distance of about 40 feet from the back of the level. There was no sign of any burning at the " face " or at any point along the level. The manager found that a good deal of oil had got on to the brattice cloth where the coal cutting machine was placed, and he attributes the ignition of the brattice cloth to the hot bar of the machine coming into contact with the oily brattice cloth.

The gate-end box for this coal cutter was some 200 feet from the site of the fire and at time of accident the coal cutter was disconnected. After the accident the drilling machine and the cable were examined but there were no signs of any burning or short circuiting. Therefore, the igniting of the brattice cloth could not have been due to any electrical means. It was also suggested that some person or persons might have been smoking and set fire to the brattice cloth. There is no evidence to support this supposition.

From the detailed inspection carried out by the manager immediately after the accident and the available evidence it would appear that the brattice cloth, which had absorbed a good deal of oil from the coal cutter, was ignited by the hot cutter bar of the coal cutting machine. If, as stated by the injured men, they were burnt by an ignition of fire-damp while drilling a shot hole, one would have expected the brattice cloth, which extended up to within 4 feet of the back of the gallery, to have been burnt, whereas the brattice cloth was not burnt, for a distance of 40 feet from the back of the gallery.

Whatever the igniting medium this accident indicates the dangers attending the use of ordinary brattice cloth in underground workings, even in safety lamp mines. Serious accidents, due to the accidental ignition of ordinary brattice cloth can be readily envisaged. A non-inflammable brattice cloth has been used in some mines, but it appears that the protective qualities are lost after the cloth has been in use for a short time. It is hoped that a non-inflammable brattice cloth will soon be on the market which will retain its non-inflammable qualities. In some mines thin galvanised iron sheeting and corrugated iron sheeting are used for " bratticing " purposes, thereby eliminating the danger referred to. It is strongly recommended that non-inflammable material be used for " bratticing " in order to eliminate the dangers attending the use of inflammable material.

Messrs. The Lodna Colliery Company (1920) Limited's Lodna (Nos. 4 and 5 pits) coal mine.

(Two persons seriously injured.)

This accident occurred in a depillaring area in No. 15 seam, which is about 24 feet in thickness. Depillaring had been proceeding normally and the goaf breaking down to the surface. During the night previous to the morning of accident, when no persons were at work in the mine the sirdar found signs of " weight " in the depillaring area and at 6-30 a. m. on day of accident he reported this matter to the assistant manager and to the day shift sirdar. The day shift commenced at 6-30 a. m. and the assistant manager went underground with the intention of making an inspection before allowing work to be commenced. On visiting the depillaring section he found that the pillars adjoining the goaf indicated signs of " weighting ", and as there were no persons there, he proceeded to the dip side of the depillaring area to make sure that miners had not gone into the working places to commence work. There were no persons present in the whole of the depillaring section, and accompanied by the sirdar, he was proceeding out of the depillaring area when there was a sudden collapse of the main roof in the goaf, which caused a heavy air-blast. The two injured persons, who were sitting down on a haulage road, were knocked over by the air-blast and received serious injuries. It is evident that the fall occurred very suddenly and the inspecting officer, who investigated this accident, was informed by the manager that it was most unusual for any air-blast to occur, because the local roof usually breaks down very regularly on the withdrawal of props, and this partially filled up the goaf.

Where air-blasts are likely to occur during depillaring operations in thick seams, " safety stations " to which all persons can be withdrawn whenever there are indications of " weight " in the depillaring area should be provided, so that work-persons can be safeguarded from the effects of air-blasts.

SECTION IV.—PROSECUTIONS AND AMENDMENTS TO THE ACT, REGULATIONS, RULES AND ORDERS MADE THEREUNDER.

(PROSECUTIONS.)

During the year judgments in the prosecutions were delivered as follows :—

The owners (eight), manager and an attendance clerk of a coal mine in the Raniganj coalfield were prosecuted; the owners and manager for the

systematic " robbing " and splitting of pillars and for employing persons in underground workings for more than nine hours a day and the attendance clerk for not maintaining a correct register of persons working underground. Three owners were acquitted and the charges against the other five owners were dropped. The attendance clerk was fined Rs. 35. The case against the manager is pending.

The owner of a coal mine in the Raniganj coalfield was prosecuted for failing to keep the inclines and shafts securely fenced. The case was withdrawn.

The owner, manager and two attendance clerks of a coal mine in the Raniganj coalfield were prosecuted ; the owner for the systematic " robbing " and splitting of pillars ; one attendance clerk for absenting himself from his duty without permission and without having been relieved by another person and both the attendance clerks for not maintaining a correct register of the number of persons working underground. The owner was fined Rs. 20, the manager Rs. 40, and the two attendance clerks Rs. 9 each.

The agent, manager and sirdar of a coal mine in the Jharia coalfield were prosecuted for allowing the dressing of the sides of pillars in contravention of an order issued under section 19(1A) of the Indian Mines Act. The agent was fined Rs. 35, the manager Rs. 25, and the sirdar Rs. 5.

The manager and the managing contractor of a coal mine in the Jharia coalfield were prosecuted for employing persons to work in a part of a quarry which was known to be dangerous and thereby caused the death of a miner by a fall of side. The manager was fined Rs. 50, and the managing contractor Rs. 500.

The two owners of a fire-clay mine in the Raniganj coalfield were prosecuted for failing to submit the notice of an accident. They were fined Rs. 25 each.

The owner of a coal mine in the Raniganj coalfield was prosecuted in that he failed (1) to maintain a register of work-persons ; (2) to keep the sides of the quarries sloped, stepped or properly secured ; and (3) to maintain a daily inspection book. He was fined Rs. 50.

The two owners of a coal mine in the Raniganj coalfield were prosecuted in that they failed to appoint a qualified manager. They were fined Rs. 50 each.

The owner of a coal mine in the Raniganj coalfield was prosecuted in that he failed to keep the two inclines, a quarry and a number of surface subsidences properly fenced. He was fined Rs. 100.

The overman and an attendance clerk of a coal mine in the Jharia coalfield were prosecuted, the overman for absenting himself from his duties although four miners were at work underground, and the attendance clerk for failing to keep the attendance register at the entrance to the mine and being absent from his duties although work was in progress underground. They were fined Rs. 10 each.

The owner of a coal mine in the Jharia coalfield was prosecuted in that he failed to keep the tops of the incline cuttings fenced. The case against him is pending.

Six managing directors and manager of a coal mine in the Raniganj coalfield were prosecuted in that (1) they allowed the development work to be continued towards old water-logged workings; (2) they failed to provide adequate means of extinguishing fire at the top of a pit; and (3) they failed to keep a number of old shafts fenced. Of the six directors, five were fined Rs. 25 each and one was acquitted. The manager was fined Rs. 5.

The owner of a coal mine in the Jharia coalfield was prosecuted in that (1) he continued to work the mine without a qualified manager; (2) he continued to work the mine although the statutory inspections of the mine were not being made by a competent person having the prescribed qualifications and he failed to keep the sides of the quarry properly sloped, stepped or secured. He was fined Rs. 100.

The owner and manager of a fire-clay mine in the Raniganj coalfield were prosecuted for failing to keep the sides of the fire-clay excavation properly sloped, stepped or secured as a result of which one person lost his life and another was seriously injured by a fall of side from the excavation. The owner was fined Rs. 100, and the manager Rs. 150.

The managing agent of a coal mine in the Raniganj coalfield was prosecuted for failing to appoint a manager with the prescribed qualifications within the specified time. He was fined Rs. 50.

The owner, agent and manger of a mica mine in the Hazaribagh district were prosecuted (1) for employing underground four females, two of whom were children; (2) for failing to maintain a register showing the persons employed in the mine; and (3) for failing to keep the roof and sides of the underground workings properly secured. The owner was fined Rs. 10, the agent Rs. 50, and the manager Rs. 75.

The owner and manager of a mica mine in the Bhagalpur district were prosecuted (1) for employing two females underground; (2) for employing underground four boys of less than 15 years of age; (3) for failing to keep the shafts fenced on the surface; and (4) for failing to maintain an accurate plan and section of the mine. The owner was fined Rs. 20, and the manager Rs. 50.

The two owners of a coal mine in the Raniganj coalfield were prosecuted for failing (1) to keep a quarry securely fenced; and (2) to keep the dangerous and insecure workings in the quarry securely fenced. They were fined Rs. 40 each.

The owner of a coal mine in the Jharia coalfield was prosecuted in that (1) he continued to work the mine without a qualified manager; (2) he failed to keep ambulance appliances at the mine; (3) he failed to keep an up-to-date plan of the underground workings in the office of the mine; (4) he failed keep several disused inclines fenced on the surface; (5) he failed to submit a notice and plan of the proposed workings, which had been extended underneath dwellings; and (6) he submitted reports to the Chief Inspector of Mines in India containing false statements to the effect that the mine was closed, although work was being carried on in the mine. He was fined Rs. 150.

The owner of a coal mine in the Jharia coalfield was prosecuted (1) for failing to submit notice of re-opening of the colliery; and (2) for failing to

submit a monthly return of coal raisings and coal despatches for the month of February 1939. He was fined Rs. 100.

The owner of a coal mine in the Raniganj coalfield was prosecuted for failing to keep all the discontinued mines fenced with fences of a permanent character. He was fined Rs. 10.

The owners (three) of a coal mine in the Jharia coalfield were prosecuted for failing to keep an incline and a quarry fenced with structures of a permanent character. They were fined Rs. 20 each.

The owners (three) of a coal mine in the Jharia coalfield were prosecuted for failing to submit notice of closing to the Chief Inspector of Mines in India. As the notice of closing was submitted afterwards the case against them was withdrawn.

The overman and an attendance clerk of a coal mine in the Jharia coalfield were prosecuted, the overman for leaving the mine although persons remained at work in the mine and he was not relieved by another competent person, and the attendance clerk for showing all persons as having returned to the surface when miners and trammers were actually still at work underground. The overman was fined Rs. 15, and the attendance clerk Rs. 25.

The owner of a mica mine in the Hazaribagh district was prosecuted (1) for allowing a child to be employed in the mine ; (2) for continuing to work the mine without a manager with the prescribed qualifications ; (3) for failing to maintain a register of work-persons on Schedule " A "; (4) for failing to keep the requisite ambulance appliances and medicines at the mine ; and (5) for failing to keep the sides of the excavations in which work was in progress adequately sloped back. He was fined Rs. 100.

The owner and an overman of a coal mine in the Jharia coalfield were prosecuted for allowing pillars to be split and " robbed ", and the owner himself for failing to keep the inclines securely fenced on the surface and failing to produce the surface and underground plans of the mine. The case is pending.

The owner of a coal mine in the Jharia coalfield was prosecuted (1) for allowing pillar " robbing "; (2) for failing to maintain the registers in accordance with Schedule " A "; (3) for failing to provide at the mine the requisite ambulance appliances and medicines ; and (4) for failing to keep incline cuttings adequately fenced. He was fined Rs. 15.

The owner of a coal mine in the Jharia coalfield was prosecuted (1) for failing to provide suitable gates or other rigid fences on cages used for lowering and raising persons in a shaft ; and (2) for failing to keep the top of the shaft properly fenced. He was fined Rs. 25.

Three attendance clerks, one banksman, one winding engine driver, one onsetter, one lamp-room in charge and one overman of a coal mine in the Jharia coalfield were prosecuted in that two of the attendance clerks,

banksman, winding engine driver, onsetter, lamp-room in charge and the overman, who were authorised in writing by the manager for specific duties, were found asleep whilst on duty ; furthermore two of the attendance clerks failed to keep a correct record of the persons returning from underground. Two of the attendance clerks were fined Rs. 15 each, and the other Rs. 10 ; the banksman Rs. 8, winding engine driver Rs. 10, onsetter Rs. 8, lamp-room in charge Rs. 10 and the overman Rs. 10.

The attendance clerk and a sirdar of a coal mine in a Jharia coalfield were prosecuted in that they being authorised in writing by the manager for specific duties were found asleep whilst on duty. The case against the attendance clerk was dropped as he absconded and the sirdar was fined Rs. 10.

Two miners of a coal mine in the Jharia coalfield were prosecuted for behaving in a violent manner while employed underground and causing serious injuries to an overman. The case is pending.

The owner and a manager of a coal mine in the Jharia coalfield were prosecuted for failing to keep the inclines and quarries properly fenced, and failing to keep the requisite ambulance appliances and medicines at the mine. The owner was fined Rs. 30, and the manager Rs. 25.

The owner of a coal mine in the Raniganj coalfield was prosecuted for continuing to work the mine without a manager with the prescribed qualifications. He was fined Rs. 15.

The District Magistrate, Allahabad, instituted a case against the agent and manager of a stone mine in his district for their failure to submit the notice of a serious accident to the Chief Inspector of Mines in India. The accused were acquitted in view of a technical defect in the prosecution order which was signed by the Deputy Magistrate instead of by the District Magistrate.

The manager and a fitter of a coal mine in the Central Provinces were prosecuted (1) for failing to see that the winding rope was in safe working order ; and (2) for failing to maintain a record of the re-capping of the said rope and the fitter for failing to see that the winding rope was maintained in safe working order. The manager was fined Rs. 500 and the fitter Rs. 200.

The agent and a manager of a coal mine in the Raniganj coalfield were prosecuted. The Agent (1) for permitting pillars to be "robbed" and allowing galleries to be driven of excessive width ; (2) for failing to keep clear the drain of a pit sump so that a proper examination of the guide rope clamps could be made ; and (3) for failing to ensure that an adequate amount of ventilation was constantly produced in the rise workings of the mine. The manager (1) for permitting pillars to be "robbed" and allowing galleries to be driven of excessive width ; (2) for failing to keep the guide ropes sufficiently tight ; and (3) for failing to ensure that an adequate amount of ventilation was constantly produced in the rise workings of the mine. The agent was fined Rs. 100 and the manager Rs. 50.

The owner and manager of a mica mine in Monghyr district were prosecuted (1) for failing to provide proper ladderways in the pits; (2) for failing to keep the sides of the shafts secured; and (3) for failing to keep the pits securely fenced on the surface. They were fined Rs. 15 each.

The owner and manager of a mica mine in the Hazaribagh district were prosecuted (1) for employing eight persons underground, who had not completed their seventeenth year and who did not possess certificates of fitness as granted by a qualified medical practitioner; (2) for failing to maintain a register of all persons employed in the mine in the prescribed form; and (3) for failing to keep the sides of the excavation securely stepped or sloped. They were fined Rs. 30 each.

The agent and manager of a mica mine in the Hazaribagh district were prosecuted (1) for employing underground two persons who had not completed their seventeenth year and who did not possess a certificate of fitness granted by a qualified medical practitioner; (2) for failing to provide proper ladderways with platforms in the shafts; and (3) for failing to keep the requisite ambulance appliances at the mine. They were fined Rs. 30 each.

The owner, agent and manager of a mica mine in the Monghyr district were prosecuted (1) for employing two children underground; (2) for failing to maintain a proper plan and section of the mine; (3) for failing to maintain the ladders in use underground in proper repair or to fasten them properly at the top and at the bottom; and (4) for failing to provide the requisite ambulance appliances at the mine. The owner and agent were fined Rs. 7-8 each and the manager Rs. 5.

Four prosecutions were instituted against mine-owners of four coal mines in the Jharia coalfield for including fictitious figures for closing stocks on the 31st December 1938, in the annual return submitted by them in January 1939. One of the owners was fined Rs. 300; two Rs. 50 each; one Rs. 25; one was acquitted; one died and the charges against three others were dropped as they were untraced.

Nine prosecutions were instituted against eleven owners for failing to submit annual returns to the Chief Inspector of Mines in India. One of the owners was fined Rs. 30; one Rs. 35; one Rs. 20; two Rs. 25 each; one Rs. 5; one was acquitted; charges against one were dropped and the case against three was withdrawn.

Three prosecutions were instituted against three applicants for sirdars' certificates for submitting false certificates of their practical mining experience. One applicant was fined Rs. 30; one Rs. 100; and the case against the other is pending.

The manager of a mica mine in the Hazaribagh district was prosecuted in that (1) he falsified the records required to be maintained under Metalliferous Mines Regulation 72; and (2) he failed to register in a book kept at the mine the names of all persons who were permitted by him to carry and use explosives. He was acquitted.

The owner and contractor of a mica mine in the Hazaribagh district were prosecuted in that (1) an inspection was not being made by a competent person, and a report of the result of such inspection was not being maintained in a book kept at the mine for the purpose; (2) the sides of many of the pits in which work was in progress were not stepped, sloped or otherwise secured; (3) none of the deep pits was fenced; (4) several discontinued open excavations were not fenced; and (5) the specified ambulance appliances were not kept at the mine. They were fined Rs. 40 each.

The owner of a coal mine in the Jharia coalfield was prosecuted in that (1) he continued to work the mine without a qualified manager; and (2) he continued to work the mine although inspections in accordance with Coal Mines Regulation 70(2) were not made by a competent person having qualifications prescribed by Coal Mines Regulation 71. He was fined Rs. 150.

The owner of a coal mine in the Jharia coalfield was prosecuted for failing to submit a plan of the discontinued workings of the mine. The case is pending.

The owners (four) of a coal mine in Jainty coalfield were prosecuted in that they continued to work the mine without a qualified manager. The case is pending.

Information was received of the following prosecutions instituted by mine officials against subordinate staff.

A sirdar of a coal mine in the Pench Valley coalfield was prosecuted for leaving a working place, knowing it to be dangerous and without taking due precautions. He was fined Rs. 60.

A fitter and a trammer of a coal mine in the Pench Valley coalfield were prosecuted. The fitter for failing to comply with the lawful orders issued by the manager in that he passed a danger signal; and the trammer for riding on a loaded set of tubs without authority. The former was fined Rs. 5 and the latter Rs. 20.

A shot-firer of a coal mine in the Pench Valley coalfield was prosecuted for failing to examine a place of accident after firing a shot. He was sentenced to nine months' rigorous imprisonment.

A timberman of a coal mine in the Pench Valley coalfield was prosecuted for attaching an empty set of tubs with flexible wire rope to a timber trolley which became detached while the set was being lowered. He was sentenced to three months' rigorous imprisonment.

A sirdar of a coal mine in the Assam coalfield charged three shots in an "opening". The coal from two shots in the roof buried the third shot but he left the place unfenced without attempting to remove the coal from the third shot hole. He was prosecuted and fined Rs. 25.

A chaprasi of a coal mine in the Raniganj coalfield was prosecuted for allowing four stone-cutters to enter the cage for descending the shaft in the absence of the banksman. He was acquitted.

A shot-firer of a coal mine in the Pench Valley coalfield was prosecuted for not observing the precautions as laid down in Coal Mines Regulations 109 and 110. He was sentenced to nine months' rigorous imprisonment.

A miner of a coal mine in the Raniganj coalfield was prosecuted for riding on tubs without authority. He was fined Rs. 20.

Two prosecutions were instituted against four miners for sleeping whilst on duty. Three of them were acquitted and one was fined Rs. 25.

Three prosecutions were instituted against four miners for behaving in a violent manner in the mine. One of the accused was fined Rs. 3; one Rs. 15; and the other two Rs. 30 each.

Three shot-firers of a coal mine in the Pench Valley coalfield were prosecuted for failing to take the precautions as laid down in Coal Mines Regulations 109, 110 and 117. One was fined Rs. 30; one Rs. 20; and the other Rs. 60.

A shot-firer of a coal mine in the Pench Valley coalfield was prosecuted for having in his possession more than the permitted amount of explosives and for sleeping whilst on duty. He was acquitted.

A shot-firer of a coal mine in the Pench Valley coalfield was prosecuted for failing to fence the entrance to a place where a shot had misfired. He was fined Rs. 10.

A Sirdar of a coal mine in the Pench Valley coalfield was prosecuted for failing to make the statutory inspection of the mine and failing to record the result of such inspection in the report book. He was fined Rs. 15.

An "in-charge" of machinery in a coal mine in the Pench Valley coalfield was prosecuted for failing to report the defects of machinery to a responsible official and for interfering with the defective parts of the same. He was fined Rs. 45.

Amendments to the Indian Mines Act and to the Regulations, Rules and Bye-Laws made under the Act.

In Notification No. M-1055, dated the 16th January 1939, the Central Government directed that certain amendments shall be made in the rules made under Section 30 published with the notification of the Government of Madras, in the Development Department, No. 6, dated the 26th November 1924, the same having been previously published as required by sub-section (1) of Section 31 of the Act. The notification is reproduced in Appendix IV, Statement No. 3.

In Notification No. M-955, dated the 9th February 1939, the Central Government framed Coal Mines Rescue Rules. The notification is reproduced in Appendix, IV, Statement No. 4.

In Notification No. M-1051, dated the 1st March 1939, the Central Government directed that further amendments shall be made in the notification of the Government of India, in the Department of Labour, No. M-1051, dated the 20th January 1938. The notification is reproduced in Appendix IV, Statement No. 5.

In Notifications Nos. M-1055(1) and M-1055(2), dated the 9th March 1939, the Central Government directed that certain amendments shall be made in the notifications of the Government of India, in the Department of Labour, No. M-1055(1) and No. M-1055(2), dated the 24th August 1938, relating to the constitution of a Mining Board for coal mines and mines other than coal mines in the province of Bihar. These notifications are reproduced in Appendix IV, Statements Nos. 6 & 7.

In Notification No. M-1055, dated the 30th March 1939, the Central Government nominated Mr. E. R. J. R. Cousins, C.I.E., I.C.S., Commissioner of the Chota Nagpur Division, to act as Chairman of the Mining Boards for coal mines and for mines other than coal mines constituted for the province of Bihar, *vice* Mr. A. P. Middleton, I.C.S.

In Notification No. M-955, dated the 20th April 1939, the Central Government in exercise of the powers conferred by Rule 4 of the Coal Mines Rescue Rules, constituted the Rescue Stations Committee consisting of certain members mentioned in the aforesaid notification. The notification is reproduced in Appendix IV, Statement No. 8.

In Notification No. M-1055, dated the 17th May 1939, the Central Government nominated Mr. C. S. Jha, I.C.S., Additional Deputy Commissioner, Dhanbad, as a member of the Mining Board for coal mines in the province of Bihar, *vice* Rai Bahadur Nagendra Nath Roy.

In Notification No. M-955(2), dated the 5th July 1939, the Central Government directed that the Supplementary Coal Mines (Temporary) Regulations, 1937, shall be cancelled.

In Notification No. M-955(1), dated the 5th July 1939, the Central Government directed that certain further amendments shall be made in the Indian Coal Mines Regulations, 1926. The notification is reproduced in Appendix IV, Statement No. 9.

In Notification No. M-955, dated the 20th July 1939, the Central Government fixed 7½ as the percentage which each Railway Administration shall be entitled to deduct, towards the cost of collection, from the total amount of excise duty collected by it under Rule 22 of the Coal Mines Rescue Rules, 1939.

In Notification No. M-955, dated the 20th July 1939, the Central Government directed that certain further amendments shall be made in the Indian

Coal Mines Regulations, 1926. The notification is reproduced in Appendix IV, Statement No. 10.

In Notification No. M-955(1), dated the 17th October 1939, the Central Government fixed the date from which the excise duties shall be levied and collected and also fixed the rate at which such duties shall be levied and collected on coal and soft and hard cokes. The notification is reproduced in Appendix IV, Statement No. 11.

By the end of the year bye-laws under Section 32 of the Act had been established at six hundred and twenty-seven coal mines and twenty-two mines other than coal. Amended bye-laws have been established at four hundred and fifteen coal mines.

Bye-laws for the treatment of coal-dust had also been established at forty-eight coal mines.

During the year one circular letter was issued to the managers of coal mines. It is reproduced in Appendix IV, Statement No. 12.

The following notifications relating to the Coal Mines Safety (Stowing) Act were issued during the year :—

In Notification No. M-955, dated the 22nd May 1939, the Central Government fixed the 27th May 1939 as the date on which the Coal Mines Safety (Stowing) Act, 1939 (XIX of 1939), shall come into force.

In Notification No. M-955, dated the 10th August 1939, the Central Government in exercise of the powers conferred by Section 3 of the Coal Mines Safety (Stowing) Act (XIX of 1939) constituted the Coal Mines Stowing Board consisting of certain members mentioned in the aforesaid notification: The notification is reproduced in Appendix IV, Statement No. 13.

In Notification No. M-955(2), dated the 17th October 1939, the Central Government framed Coal Mines Safety (Stowing) Rules. The notification is reproduced in Appendix IV, Statement No. 14.

SECTION V.—GENERAL REMARKS.

Protective Equipment.

During the year several thousands of "safety hats" made of bamboo were worn by miners at a number of mines in the Jharia and Raniganj coalfields. In the Assam mines, owned by the Assam Railways and Trading Company, Limited, "safety helmets" made of compressed fibre material and imported from Great Britain were used. Over 200 of these helmets were worn by miners employed in "openings" or "chambers" where small pieces of roof or side coal may fall unexpectedly on the miners' heads.

Bamboo hats were first introduced at Sendra colliery. The manager employed a contractor to make these hats and when large numbers were produced the cost worked out at only two annas each.

The efficacy of this head protection is illustrated by the following occurrence. An assistant reported to the manager of the mine as follows :— " at about 3 p.m. on 1st September a piece of coal fell from a height of 15 feet on to the bamboo " safety hat " worn by timber coolie, Bhureswar Singh, while holding with other timber coolies, a prop for erection in the 5th rise of No. 6 west drift (13 seam). The piece of coal pierced through the hat and caused a slight cut on his head. Had his head been bare, the injury might have been very serious or fatal as is evident from the nature of the cut in the hat.

Photograph 1 illustrates " A group of miners wearing bamboo hats ready to proceed underground ", while Photograph 2 illustrates the damaged hat referred to above.

Another case will further indicate the additional safety afforded to miners by wearing these hats. A manager reporting another occurrence to his Chief Mining Engineer stated :—" This is to inform you that a miner of No. 1 pit, Thakur Singh, while working in 14 seam depillaring area on 21st February, was struck on the head by a piece of coal weighing about 2 lbs. falling from a height of about 12 feet. Fortunately his head was not hurt as he was wearing one of the bamboo hats already issued to him. The piece of coal after striking his head struck his shoulder which was scratched and bruised, then the coal fell on to his left heel ".

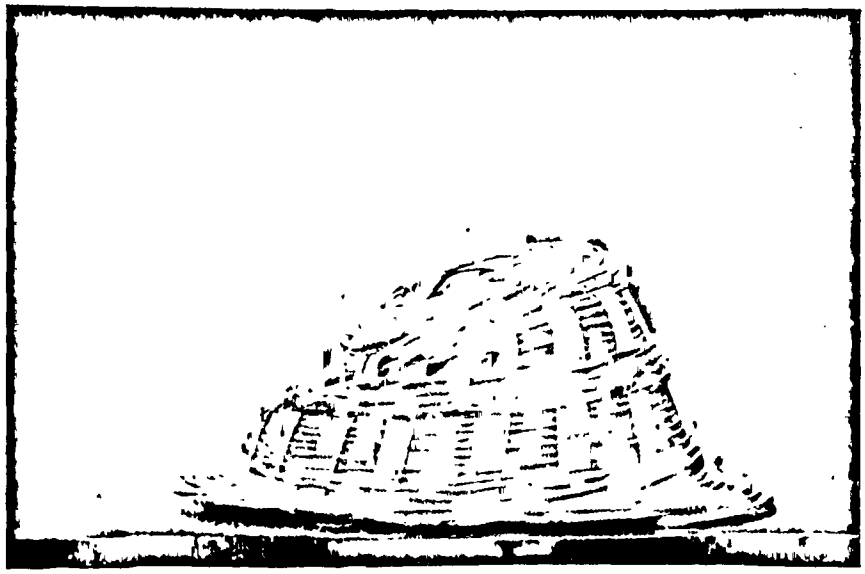
In view of the benefits derived by using such protection the extended use of these hats or of any other type of hat which will protect the miner and reduce the number of accidents due to head injuries is strongly recommended.

Air-blasts in underground workings.

Air-blasts caused by the collapse of large areas of roof in goaves are common in working thick seams, except in those mines where the goaves are stowed. It is in " panel " districts, where there are few openings into the area where air-blasts are likely to prove most dangerous, unless precautions are taken to keep the workers clear of the force of the blast, by withdrawing them to " safety stations " when " weighting " is detected, as referred to in connection with an accident due to an air-blast, of which full details are given in Section III of this report.

I am indebted to the management of Bararee colliery, owned by the East Indian Coal Company, Limited, for giving me details of the measurement of air presssures produced by large goaf falls as recorded at that colliery. Figures 1 and 2 show copies of charts taken from a self-registering water gauge situated underground in Bararee colliery, at a point near which depillaring operations are proceeding.

A group of miners wearing bamboo hats ready to proceed underground.



A bamboo hat worn by a miner and damaged by a fall of roof.

Photo.-Litho. Office, Survey of India.

CHARTS OF SELF-REGISTERING WATER GAUGE.

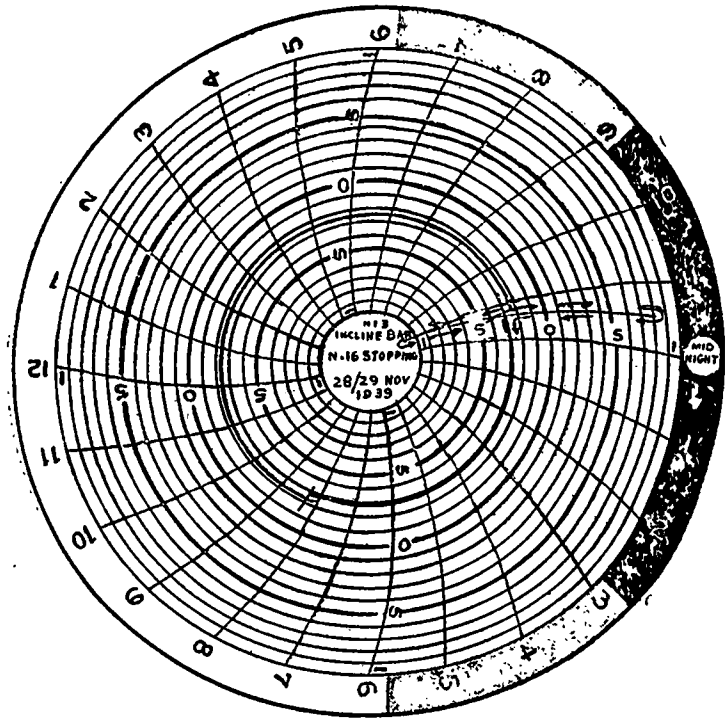


FIG. 1.

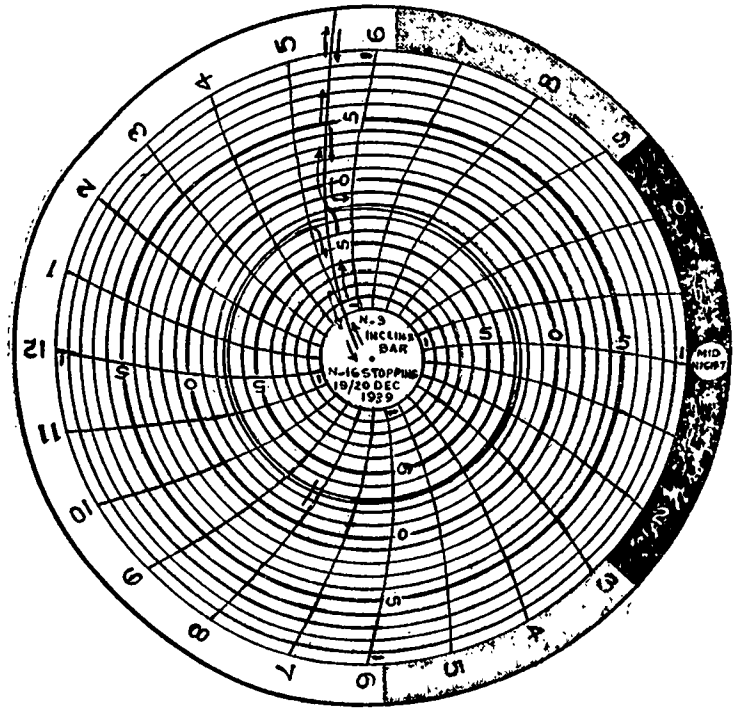


FIG. 2.

The water gauge is in use on a fire stopping, giving continuous readings of the water gauge existing between the inside and outside atmospheres of the stopping. The charts show the swing due to air pressures set up by a big goaf fall during depillaring operations in No. 15 seam (27 feet in thickness) at a distance of 700 feet away from the instrument. The sequence of pressures shown on the chart, dated 28th/29th November, were as follows :—

\+ 0·9 inch water gauge (positive).
— 1·1 inch water gauge (back lash).

From the " table of equivalents " as provided by the makers of the instrument, relating to velocity and air pressure, the following velocities for the above-mentioned air pressures are given :—

0·9 inch water gauge just under 4,000 ft. per minute (positive).

1·1 inch water gauge just over 4,000 ft. per minute (back lash).

In this instance the area collapsed was roughly 11,000 square feet, but it was supported in part, and the collapse did not break through to the surface. Three weeks later, *i.e.*, on the 19th December, after some little extension of the depillaring operations, the area collapsed to surface. The area affected in the workings was 14,000 square feet with a broken surface area of 2,800 feet. The cover was 110 feet. The chart dated 19th/20th December shows the effect of the air-blast on the recording water gauge. It will be observed on that chart that both ends of the pressure swing are incomplete. That towards the centre of the chart was stopped by the centre pin of the iustrument and that on the outside having passed over the edge of the paper. The limits of the above show that the first pressure was something unknown over 1·6 inch water gauge, and the " back-lash " pressure of something over 1·7 inches. These pressures represent air velocities— according to the " table of equivalents " provided by the makers—of about 5,000 feet per minute.

It will be observed that unless precautions are taken by leaving " vent holes " in " panel " districts for the release of pressure and places for the safe retreat of workers are provided these air-blasts are likely to produce disastrous effects.

Underground Fires.

In my Annual Reports for the years 1932, 1933, 1935, 1937 and 1938 reference was made to extensive fires at the Kusunda group of mines and at the Khas Jharia group of mines and the precautionary measures being adopted to prevent the spread of the fires. At the Kari Jore the protective works have been continued throughout the year under the supervision of the management of the Bhuggutdih colliery, owned by the Bengal Nagpur Coal Company, Limited, and it is considered that the efforts of the several large companies, who undertook these protective works at great cost, are meeting with success, as the old workings in No. 11-12 seam under the jore have now been stabilised. There is no doubt that if these protective works had not been energetically pursued, the Kari Jore would have collapsed, resulting in the spread of fire and the flooding of adjoining collieries. The protective works are now chiefly concerned with preventing the extension of the fire in No. 13 seam workings.

At the Khas Jharia group of mines protective works, consisting of "blanketing" and the flushing of sand through boreholes in the vicinity of the Jharia-Pathardih main line of the East Indian Railway, was continued throughout the year under the supervision of the Mining Adviser to the East Indian Railway.

Health and Sanitation.

The Asansol Mines Board of Health was reconstituted in March 1939 under Government of Bengal Notification No. 297-P. H., dated the 7th March 1939. The Divisional Medical Officer, East Indian Railway, replaced the Civil Surgeon, Burdwan, as *ex-officio* member, and a representative of the National Association of Colliery Managers in place of the Indian Mine Managers' Association was nominated by the Government. The Board held two special and twelve ordinary meetings during the year. Both the birth-rate and the death-rate were at about the same level as in the previous year. The infant mortality rate fell from 137·2 per 1,000 in 1938, to 129·8 in 1939. The death-rate among the resident colliery population was considerably below that of the general population throughout the year. The monthly returns from collieries showed a fluctuation in the mortality rate between 19·5 and 8·2 per 1,000, while the death-rate of the Mining Settlement as a whole ranged between 24·0 and 16·4 per 1,000. The monthly variation in the sickness rate among the mining population ranged between 14·7 per cent. in July and 8·0 per cent. in February—the first half of the year being comparatively healthy as compared to the second half, which is usually associated with malaria, enteric and respiratory diseases. Epidemic cholera, associated with agglutinable vibrio, made its appearance in April, reached its maximum intensity in August, and declined subsequently. Out of 781 cases, 275 were reported from collieries, 472 from villages and 34 from the municipal towns. The incidence rate was 4·6 per 1,000 in collieries and 1·7 per 1,000 in rural areas. Intensive inoculation was carried out both in anticipation of and during the prevalence of cholera. 72,188 persons were inoculated, of whom 30,211 were of the colliery population. Measures under the Cholera Regulations were taken to prevent the spread of infection. Small-Pox has been kept under control by keeping the population protected by mass re-vaccination on a large scale every year during the last few years. The total number of persons vaccinated in 1939 was 93,479, which represents about one-fourth of the population. 109 cases and 14 deaths from Small-Pox were reported during the year. Among the provisions of the Small-Pox Regulations enforced, was compulsory re-vaccination in any area notified as an "infected area". The number of Maternity and Infant Welfare Centres was increased from nine to ten with an additional sub-centre situated in an important colliery. Each centre was in charge of a Health Visitor and served the needs of the neighbouring group of collieries and villages. 287 infants and 185 toddlers attended the morning clinics at these centres. 2,099 cases of confinements were attended by trained dais and 195 by the Health Visitors. 1,560 expectant mothers were under ante-natal supervision and 2,403 cases were kept under post-natal supervision by the Health Visitors. 2,095 infants and 1,158 toddlers were visited in their homes. Out of 167 dais trained during the year 104 appeared in the examination conducted by a Board of Examiners and 84 received certificates.

The three Welfare Centres opened by Messrs. McNeil & Company for a group of collieries continued to do useful work throughout the year.

Fourteen Leprosy clinics were maintained under the supervision of 5 Leprosy Officers assisted by 14 trained assistants, who carried out intensive survey, propaganda and home-visiting of lepers in their houses. A detailed survey revealed an infection rate of 1·5 per cent. in the general population. A special investigation among the 5,400 known lepers showed a definite history of contact with relations and neighbours in 2,582 cases—the infection being traceable to parents in 527 cases, to brothers and sisters in 391 cases, to other relatives in 592 cases, to conjugal infection in 94 cases and to association with neighbours in 1,008 cases. 2,895 cases were registered for treatment, of whom 246 either became symptom-free or were discharged cured. The Asansol Leper Settlement, which is under construction at an estimated cost of Rs. 40,000, provides for a hospital with 18 beds and groups of cottages and huts for 50 leper beggars and highly infectious cases of leprosy. The Annual Leper-Day was responsible for a total collection of Rs. 32,500, of which over Rs. 12,500 represented the day's collection by sale of flags and the sum of Rs. 20,000 was received as a special donation for the Leper Settlement.

Anti-malaria measures were carried out in 10 malarious areas and included abolition and treatment of breeding places with larvicides along with field survey and laboratory investigation. Rural areas were encouraged to undertake suitable measures by rendering assistance and advice. A free distribution of quinine was also given during epidemic seasons.

The Annual Health and Baby Week was arranged by the Welfare Society in co-ordination with the Board of Health. In addition to the Health Exhibition and Baby Show, training and competitions were arranged in various centres in first-aid, home-nursing, mother-craft and health study. The Ambulance competition met with increasing success and helped to stimulate training and practice in first-aid and ambulance service among miners and non-miners and also among school boys.

During the year the Jharia Mines Board of Health held twelve ordinary, five special meetings and four joint meetings with the Jharia Water Board. The estimated population of the settlement was 566,607 persons. The death rate was 15·05 per thousand, as compared with 16·33 in the previous year. There were 246 cases of suspected cholera with 90 deaths, as compared with 86 cases with 30 deaths in the previous year. The number of deaths on collieries from cholera was 20, as compared with 5 in the previous year. The total number of anti-cholera inoculations performed was 7,992. During the year, there were 1,896 cases of suspected Small-Pox with 203 deaths, as compared with 378 cases with 19 deaths in the previous year. Four hundred and forty-two samples of food were analysed in the Board's laboratory and prosecutions were ordered in all cases of adulteration. The five years' housing programme, enforced by the Board last year, continued during the year. Subjects chosen for propaganda were leprosy, maternity and child welfare, general hygiene, sanitation, dietetics, vitamins and temperance.

The Dhanbad and District Leprosy Relief Fund continued to be in sole charge of all leprosy relief work in the Mining Settlement.

The Jharia Water Board continued to function throughout the year. The total quantity of water supplied during the year under review was about 470 million gallons as per details given below :—

	Gallons.
1. Collieries	387,265,000
2. Non-colliery premises (domestic and non-domestic supply)	33,945,000
3. Bazars of Jharia, Katras and Kirkend and other places supplied through standposts.	48,910,000
Total	470,120,000

Inspections made by Medical Officers as *Ex-Officio* Inspectors of Mines.

During the year many reports were received from provincial and district Medical Officers of Health concerning health and sanitation. All the reports were dealt with and most of the recommendations were carried out.

Statistics of Rainfall.

Statistics of rainfall in the eastern coalfields have been recorded as follows :—

	Rainfall in inches.	
	1939.	1938.
Jharia Coalfield—		
Jealgora	52·55	51·24
Topchanchi	63·88	36·34
Raniganj Coalfield—		
Asansol	56·86	47·87
Dishergarh	66·35	53·59
Giridih Coalfield—		
Giridih	64·40	52·25

During the year the rainfall in the catchment area at Topchanchi was 63·88, as against 36·34 inches in the previous year. The main problem during the first half of the year was in meeting the situation arising out of a shortage of water in Topchanchi reservoir owing to an exceptionally low and irregular rainfall during the previous year. Various efforts were successfully made to curtail the consumption as far as practicable to the minimum requirements of consumers by means of restricting the hours of supply and by taking steps to prevent leakage and wastage of water. Besides, subsidiary sources of supply were considered necessary in order to meet the increased demands of water during the summer months of the year. A pumping scheme to which reference was made in my last Annual Report to augment the supply with filtered and chlorinated pit water was introduced at Kustore colliery and it was put into operation by the end of January

and continued up to the 26th September. The lake water level started rising from 22nd June and twenty-four hours' supply was restored by the end of August. The lake was filled up to the overflow level on 12th September and the maximum overflow of the year was reached at 7 a.m. on the 23rd September.

Ambulance Work.

Four meetings of the Executive Committee of the Dhanbad-Jharia Coalfield Centre of the St. John Ambulance Association were held during the year.

Lectures in first-aid were given at eighteen centres in the Jharia coalfield and five centres in the Dhanbad civil area. In addition to these centres arrangements were made for lectures in first-aid for mine workers at Khalari, Ranchi district, at Shahabad in the province of Bihar, at Talcher and Rampur collieries in the province of Orissa, and Shankargarh in the United Provinces. During the year, 396 candidates appeared for examination, of whom 316 were successful in obtaining first-aid senior certificates through this centre. The growth and importance of this centre is demonstrated by the gradual increase in the number of persons examined and the number of certificates granted. The number of persons examined and the number successful were as follows :—

Year.	No. examined.	No. successful.
1935	169	117
1936	256	219
1937	380	282
1938	313	255
1939	396	316

A circular letter was sent to all collieries in the Jharia coalfield calling on owners, agents or managers to organise " refresher " lectures in first-aid for their employees who have been in possession of first-aid certificates for a number of years. Although definite figures cannot be given of the number of centres at which such lectures have been given and the number of persons who attended the lectures, enquiries made by Inspectors of Mines have revealed that a very large percentage of the 2,900 first-aid certificate holders has attended " refresher " lectures. It is pleasing to record that all senior boys of the Jharia Raj H. E. School are now taking a course of lectures in first-aid and the senior girls of the Dhanbad Girls' School are receiving lectures in first-aid, home-nursing, etc.

Another very important extension of the activities of the centre has been the formation of Ambulance Divisions under the St. John Ambulance Brigade in Dhanbad and the Jharia coalfield. In the Dhanbad civil area one Ambulance Division and one Nursing Division have been organised by Dr. J. N. Sen, Secretary, and in the Jharia coalfield Ambulance Divisions have

been organised at (*a*) Bararee colliery, (*b*) Lodna colliery, (*c*) Kustore colliery (*d*) Jamadoba colliery, (*e*) Pure Jharia colliery, (*f*) Loyabad colliery, and (*g*) Katras and Malkera collieries. These Divisions have been so arranged as to serve definite areas in the event of major mine accidents and to give assistance in case of Air Raids. In most cases members of these Divisions have been recruited at several collieries in the vicinity of the Divisional headquarters. Members of these Divisions have already completed a course of lectures in first-aid and special classes in stretcher drills will be arranged as soon as the services of a Havildar can be obtained on loan from No. 9 Brigade Headquarters. It is proposed to organise competitions for the Ambulance Divisions and for teams from various collieries and schools early in 1940.

The administration and organisation of the centres has been undertaken principally by the Chairman, Mr. N. Barraclough, Inspector of Mines, who has been ably assisted by Dr. J. N. Sen, Joint Secretary.

In the Raniganj coalfield classes in first-aid to the injured were held at eleven centres. Three hundred and twelve candidates attended these classes and 234 were awarded certificates, as compared with 167 and 118, respectively, in the previous year. A women's class was held at Dishergarh centre where ten students attended and passed.

The St. John Ambulance Shield, which is competed for among teams from the various collieries in the Raniganj coalfield, was won by Seetalpur colliery team (Messrs. Bengal Coal Company, Limited), the runners up being Sodepur Nos. 9 and 10 pits team (Messrs. Bengal Coal Company, Limited). Medals were presented to the individual members of the above teams.

The Lang-Cunningham Memorial Shield was won by Dishergarh colliery team (Messrs. Equitable Coal Company, Limited). The Lang Memorial Shield was won by Victoria West colliery team (Messrs. New Beerbhum Coal Company, Limited), the runners-up being Seebpur Workshop team (Messrs. Bengal Coal Company, Limited). All these competitions were held at Asansol during the Health Exhibition week, and created much general interest.

I wish to express my appreciation of the valuable work done by lecturers and examiners in the two major coalfields and other mining districts.

Mining Boards in Bengal, Bihar and the Central Provinces and Berar.

The Bengal Mining Board did not meet during the year and the only subject dealt with was done by correspondence and concerned certain amendments to Indian Coal and Metalliferous Mines Regulations, 1926. The non-official members of the Board were Messrs. F. W. Manley, A. L. Ojha and Rai Sahib Upendra Nath Mondal.

The Bihar Mining Board for coal mines held one meeting during the year and the only subject discussed at the meeting and also dealt with by correspondence was certain amendments to the Indian Coal Mines Regulations, 1926. The non-official members of the Board were Messrs. J. E. Phelps, A. L. Ojha, Shiva Kali Bose and S. B. Sen.

The Bihar Mining Board for mines other than coal mines did not meet during the year and the only subject dealt with was done by correspondence and concerned certain amendments to the Indian Metalliferous Mines Regulations, 1926. The non-official members of the Board were Messrs. H. W. T. Martin, J. E. Phelps and Rao Bahadur D. D. Thacker.

The Central Provinces and Berar Mining Board held no meetings during the year. The subjects dealt with by correspondence were :—(*a*) Proposed amendments to Indian Coal Mines Regulations, 1926 ; (*b*) proposed amendments to Indian Metalliferous Mines Regulations, 1926 ; and (*c*) draft Coal Mines Safety (Stowing) Rules. The non-official members of the Board were Messrs. L. H. Bartlett, O.B.E., G. Llewelyn, Samsher Bahadur Verma, Kunjbeharilal Tulsiram Mehta and D. M. Nargolwala. Mr. D. M. Nargolwala was replaced by Mr. Gulab Chand Choudhury on 23rd August 1939.

Board of Examiners.

Five meetings of the Board of Examiners were held during the year. The non-official members of the Board were Messrs. N. N. Sarkar, J. E. Phelps and L. A. Jacobs. The first named member was replaced by Mr. H. K. Nag and the last named member was replaced by Mr. G. Castles. The local examiners appointed were Messrs. J. Thomson, W. B. Penman for coal mine managers' first class certificates ; Messrs. B. Panda and D. Heron for coal mine managers' second class certificates, and Mr. J. Mackay for the examination for coal mine surveyors' certificates. Mr. N. G. Chatterjee, Inspector of Mines, was also an examiner and acted as Secretary for the coal mine managers' first and second class and coal mine surveyors' examinations.

Nine first class certificates of competency to manage coal mines and one surveyor's certificate were granted in lieu of British certificates of the same class. At the examinations for coal mine managers' certificates held at Dhanbad in February, 115 candidates sat for first class certificates and 114 for second class certificates. Seven certificates of the first class and twenty-four of the second class were granted. At the examination for coal mine surveyors' certificates of competency held in November, 57 candidates attended the examination. Twenty-five of them were successful.

Nine hundred and two persons were examined for coal mine sirdars' certificates of competency and 664 certificates were granted. Out of 750 holders of sirdars' certificates examined in gas testing, 502 were successful and their certificates were duly endorsed to that effect. 458 holders of sirdars' certificates appeared for re-examination in eye-sight and hearing. 439 were successful and their certificates were duly endorsed. Under Coal Mines Regulation 49, the certificates of nine sirdars were suspended, each for a period of three months. During the year 17 duplicate sirdars' certificates and 55 duplicate discs were issued.

As Regulation 108 (3) of the Indian Coal Mines Regulations provides that with effect from 1st April 1940, no person shall be appointed as a shot-firer unless he holds a shot-firer's or a sirdar's certificate, the examination for shot-firers' certificates commenced from the 10th of July 1939. During the year under review 351 candidates were examined and 289 of them were successful.

Mining Education.

At the Indian School of Mines, the number of students on the roll at the beginning of the session was 90, as compared with 76 in the previous session. 27 students were in the first year, 28 in the second year, 21 in the third year, and 14 in the fourth year. At the end of the session 25 first year students were promoted to the second year and 25 second year students were promoted to the third year. The numbers of candidates appearing at the final examinations held in July 1939 were as follows :—

Diploma or Certificate.	No. of candidates appeared.	No. of successful candidates.
Diploma of Associateship in Geology	2	2 (Class II).
Diploma of Associateship in Mining Engineering . .	13	3 (Class I) (*a*).
		10 (Class II).
(*a*) including one re-examinee.		
Certificate in Geology	2	2
Certificate in Metal Mining	1	1
Certificate in Coal Mining	19	18

There were 66 students at the mining survey camp held at Tata Iron and Steel Company, Limited's Sijua colliery in November 1939, and 5 at the Geology survey camp at Gonhudih colliery. The usual excursions and visits to mines were held throughout the year. Ten former students obtained the second class colliery managers' certificate, and the first eight places in order of merit, except the second, at the examination were taken by former students. One former student obtained the first class colliery managers' certificate and three obtained the surveyors' certificate of competency.

In the Department of Mining and Metallurgy at the Benares Hindu University there were 118 students at the beginning of the session, as compared with 116 at the beginning of the previous session. Six students passed the final examination for the Degree of B. Sc. in Mining and 8 in Metallurgy. Up to date the total number of Mining graduates is 37 and the total number of Metallurgy graduates 77. Most of the graduates were employed almost immediately after qualifying. Tours of inspection were paid to the Mica Mines at Kodarma, the West Jamuria colliery and the Dishergarh colliery in the Raniganj coalfield and the iron Mine at Noamundi. Geological field work was conducted at Barakar. Mine surveying camp was held at Begunia colliery, Barakar, where 15 students were employed. During the Summer vacation 48 students took up practical training in the most important mining and metallurgical works, including the lead and silver mines of Upper Burma and the Khewra salt mines, Punjab. One former student was successful at the first class colliery managers' examination and another stood second at the second class colliery managers' examination, held at Dhanbad in February.

The Evening Mining Classes (in English) were re-opened in the Raniganj coalfield, Bengal, with effect from the 8th July 1939. Pending the appointment

of a whole-time lecturer and a whole-time assistant lecturer, one temporary part-time lecturer and one temporary part-time assistant lecturer were appointed for each of the two centres—Sitarampur and Parascole. The total number of students attending the classes at these two centres was 100. Similar classes continued to be held under the auspices of the Government of Bihar at Jharia and Sijua in the Jharia coalfield. The total number of students attending these classes at the two centres was 148, as against 105 in the previous year. Fourteen of the third year students appeared at the final examinations and four were successful. In both the coalfields, courses of lectures were delivered in the modern Indian language to overmen and sirdars, in the Raniganj coalfield in Bengali, and in the Jharia coalfield in Hindi. There were eight centres in the Raniganj coalfield and 172 students were enrolled for this course. In the Jharia coalfield there were six centres with a total enrolment of 446. Classes in gas testing were also held as usual at Sitarampur and Jamuria in the Raniganj coalfield and at Jharia in the Jharia coalfield for the training of colliery sirdars and shot-firers in gas testing. The number of candidates enrolled for these classes in the Raniganj coalfield was 61 and in the Jharia coalfield 76. Special classes in Mine Surveying could not be held in the Jharia coalfield because there was no permanent mining lecturer.

Scientific and Technical Associations.

(*a*) *Mining, Geological and Metallurgical Institute of India.*

The total number of members, including subscribers, at the end of the financial year of the Institute, *i.e.*, on the 31st October 1939, was 462. Admission fees, which had been remitted or reduced for several years in the past, were re-imposed during the year. In addition to the annual meeting, seven ordinary general meetings were held for the reading and discussion of papers. Visits were also paid to the offices and printing works of the Statesman Limited, Calcutta; to the plant and mining operations at the Noamundi, Singhbhum district; to inspect the sand stowing operations at Messrs. F. W. Heilgers & Company's Bhulanbararee colliery in the Jharia coalfield and Messrs. The Bengal Coal Company, Limited's Sodepur Nos. 9 and 10 pits and Seetalpore colliery in the Raniganj coalfield. Illustrated lantern lectures were delivered by Major C. W. T. Hook and by Mr. J. B. Auden, the subjects being "Air Raid Precautions" and "The Shaksgam Expedition, 1937", respectively.

Three parts of the Transactions were published, forming part 3 of Volume 34, and parts 1 and 2 of Volume 35. The Government of India prize was awarded to Mr. B. Wilson Haigh for his paper entitled "Coal Carbonisation and some of its By-Products"; the Institute silver medal to Dr. F. G. Percival and Dr. E. Spencer for their joint paper entitled "Conglomerates and Lavas in the Singhbhum-Orissa Iron Ore Series" and to Dr. M. S. Krishnan for his paper entitled "Mineral Wool"; the Institute bronze medal to Dr. D. Swarup and Messers. V. G. Iyer and A. H. K. Iyer for their joint paper entitled "An investigation into the possibilities of manufacturing carbon electrodes in India" and to Messrs. L. J. Barraclough and S. B. Hall for their joint paper entitled "Hydraulic stowing in India: Obtaining Supplies of Sand". The Pickering medal, presented by the

Institute for the best student in Mining at the Indian School of Mines, was awarded to Mr. V. Srivivasan for the session 1937-38, and to Mr. W. N. Batra for the session 1938-39.

(*b*) *The Geological, Mining and Metallurgical Society of India.*

At the close of the session 1938-39 the total membership on the roll was 190. In addition to the annual general meeting, eight ordinary general meetings were held. Five meetings were held in the Geological Laboratory, Presidency College, Calcutta; one at the Bhulanbararee colliery, Jharia coalfield, one in the Jharia Lecture Hall and one in the Municipal Hall, Asansol. Thirteen original papers on various aspects of Geology, Mining and Metallurgy were read and discussed at these meetings. During the year parts 3 and 4 of Volume X and parts 1 and 2 of Volume XI of the Quarterly Journal of the Society were issued. One bulletin was also published entiled " On uses and applications of sheet and waste mica ". Four excursions to the following places were arranged:—(i) His Majesty's Mint, Strand Road, Calcutta; (ii) Bhulanbararee colliery (Jharia coalfield) of Messrs. Bird & Company jointly with the Indian Mine Managers' Association; (iii) the Equitable Coal Company, Limited's Jamuria Colliery in the Raniganj coalfield jointly with the Indian Mine Managers' Association; (iv) the Tata Iron and Steel Company, Limited's Works, Jamshedpur, jointly with the Indian Mine Managers' Association.

(*c*) *The National Association of Colliery Managers* (*Indian Branch*).

The number of members of the National Association of Colliery Managers, Indian Branch, at the end of the year was 96. Some of the subjects dealt with by the Council during the year were:—Proposed amendments to the Indian Coal Mines Regulations, 1926; draft Coal Mines Safety (Stowing) Rules. The Government of India agreed to a request made by the Council that the age limit for applicants for the post of Junior Inspector of Mines should be 35 years. The request made to the Government of Bengal to grant service certificates to electrical supervisors, without examination, contingent upon such workmen having the necessary qualifications in respect of their length of service as supervisors at the time of the rules coming into force, was declined. Mr. W. V. Curtain officiated for Mr. J. Thomas, the Association's representative on the General Council in Great Britain, while the latter was on a visit to India. Mr. C. W. G. Hindley was joint representative of the National Association of Colliery Managers (Indian Branch) and the Indian Mine Managers' Association on the Asansol Mines Board of Health; Mr. V. C. Durham represented the Association on the Mining Education Advisory Board; Mr. W. McDonald represented the Association on the Rescue Stations Committee and Mr. W. V. Curtain was the representative on the Asansol Health and Baby Welfare Central Committee. Mr. H. S. Allen respresented the Association on the Dhanbad and District Leprosy Relief Committee and Messrs. T. Morrison and H. S. Allen were the Association's representatives on the Dhanbad and Collieries Cemetery Committees. Messrs. L. S. Buxton and D. W. Baron represented the Association on the Railways and Collieries Advisory Board.

At the annual general meeting films from the Safcty in Mines Research Board (Great Britain) were displayed, depicting the " Testing of flame-proof apparatus " and " Coal dust explosions ".

(d) The Indian Mine Managers' Association.

The membership of the Indian Mine Managers' Association at the end of the year was 245. Among the activities of the Association during the year were the following:—(1) Revision of the Rules and Bye-laws of the Association; (2) consideration of the position of the members with second class colliery managers' certificates and an interview with the Chief Inspector of Mines regarding their employment as assistants at large mines; (3) consideration of the Electrical Supervisors' examination; (4) participation in the Railways and Collieries Advisory Board's meetings; (5) consideration of the Centralisation scheme of explosives' magazines; (6) consideration of the Coal Mines Safety (Stowing) Rules, 1939; (7) consideration of the amendments to the Coal Mines Regulations, 1926; (8) consideration of the amendments to the Coal Mines Rescue Rules, 1938; (9) consideration of the rates of depreciation of machinery, etc., for income-tax purposes; (10) interview with the Hon'ble Mr. Anugrah Narain Sinha, Minister for Finance and Local Self-Government, Bihar, regarding representation on the Jharia Mines Board of Health and other local bodies; (11) interview with the Chief Inspector of Mines regarding appointment of Indian examiners for the competency examinations; (12) participation with the Safety First Association of India, Bombay; (13) reading of Scientific papers; (14) printing of Coal Mines Act, Rules, Regulations and Bye-laws. Mr. S. C. Ghosh was the representative on the Asansol Health and Baby Welfare Society (Central Committee) and on the Mining Education Advisory Board; Dr. R. P. Sinha was the representative on the Rescue Stations Committee; and Mr. C. W. G. Hindley and Mr. W. V. Curtain of the National Association of Colliery Managers (Indian Branch) represented this Association jointly with the National Association of Colliery Managers (Indian Branch) on the Asansol Mines Board of Health.

(e) The Railways and Collieries Advisory Board.

The Railways and Collieries Advisory Board dealt with the following subjects during the year:—(1) detention of wagons in the weigh-bridges and consequent demurrages; (2) unloading of and nominal wharfage charges for undelivered wagons at the destination; (3) security from depot-holders; (4) leaving of empty wagons at the buffer ends of sidings; (5) halting places and timings of the local trains; and (6) re-opening of Katras weigh-bridge.

Four meetings were held in 1939. The Divisional Superintendent, East Indian Railway, Asansol, was the President of the Board and the Coal Area Superintendent, East Indian Railway, Dhanbad, was the Honorary Secretary.

THE COAL MINES STOWING BOARD.

As a result of the recommendation of the Coal Mining Committee which was appointed in 1936, the Central Legislature at its Delhi session in 1938-39,

enacted the Coal Mines Safety (Stowing) Act which came into force from the 27th May 1939. This Act applies to the whole of British India except the Punjab and Assam.

The objects of the Act are :—

(*i*) to make further provision for safety in coal mines by taking measures to facilitate or require therein the carrying out of the operations known as stowing ; and

(*ii*) to provide for the creation of a Fund for the assistance of such operation.

Under the Act, the Chief Inspector of Mines or an Inspector of Mines is empowered to order the owner, agent or manager of any coal mine to execute such protective measures, including stowing, as the Chief Inspector of Mines or the Inspectors of Mines may consider necessary if in the opinion of the Chief Inspector or Inspector

(*a*) the extraction or reduction of pillars in any part of the mine is likely to cause the crushing of pillars or the premature collapse of any part of the workings or otherwise endanger human life or the mine, or

(*b*) adequate provision against the outbreak of fire or flooding has not been made by providing for the sealing off and isolation of any part of the mine or for restricting the area that might be affected by fire or flooding, as the case may be.

The Act provides for the creation of a Coal Mines Stowing Fund by the levy of an excise duty on coal and coke and the administration of the Fund by a body known as the Coal Mines Stowing Board. The Board which began to function from the 1st November 1939, consists of the following members :—

Chairman.

MR. N. MAHADEVA AYYAR, I.C.S.,
(appointed by the Central Government).

Members.

The Chief Inspector of Mines in India (*Ex-officio*).

MR. J. B. ROSS
MR. C. A. INNES } nominated by the Indian Mining Association.

MR. M. N. MOOKERJEE—nominated by the Indian Mining Federation.

MR. A. L. OJHA—nominated by the Indian Colliery Owners' Association.

Secretary.

KHAN SAHIB BAZLUL KARIM—appointed by the Board.

The Government of India have fixed the rate of duty on coal and soft coke at annas two per ton and on hard coke at annas three per ton from the 1st

December 1939. These duties are collected by the Railway Administrations along with the freight and the net receipts during the year after meeting the collection charges are paid to the Board.

The office of the Board was formed in Calcutta on the 1st November 1939, and four meetings of the Board were held before the end of the year.

The Board has formulated the principles which should govern grant of assistance from the Coal Mines Stowing Fund to owners, agents or managers of coal mines and the necessary draft rules have been submitted to the Government of India for their consideration.

THE RESCUE STATIONS COMMITTEE.

In Notification No. M-955, dated the 20th April 1939, the Government of India notified the constitution of the Rescue Stations Committee as follows :—

1. Mr. N. Barraclough . . .	Inspector of Mines, nominated by the Chief Inspector of Mines in India.
2. „ S. F. Tarlton . . .	Nominated by the Indian Mining Association.
3. „ P. Basu	Nominated by the Indian Mining Federation.
4. „ W. McDonald . . .	Nominated by the National Association of Colliery Managers.
5. Dr. R. P. Sinha . . .	Professor of Mining Engineering, Indian School of Mines, nominated by the Indian Mine Managers' Association.
6. Mr. P. C. Bose	Nominated by the registered Trade Unions of Miners.
7. Rao Bahadur D. D. Thacker .	Nominated by the Central Government (to represent the interests of miners).

The first meeting was convened on the 8th May 1939, and Mr. N. Barraclough was elected President by a unanimous vote of the Committee.

The Committee held fifteen meetings during the year 1939, and considerable progress was made. Preliminary investigations into the design of rescue stations, the most suitable type of self contained breathing apparatus for use in India, the cost of apparatus, spares, etc., the cost of supply of electricity and of water and the approximate cost of operating the two stations were made.

After visiting a number of sites in both coalfields and considering their relative suitability as to location, underground support and supply of electricity and water, the site finally selected for the Rescue Station in the Jharia coalfield is in Bhagatdih mouza, at the west side of the Dhanbad-Jharia main road, 2½ miles from Dhanbad railway station and 2¼ miles from Jharia town, and the site for the rescue station in the Raniganj coalfield is in Burra Dhemo mouza at the south side of the Grand Trunk Road at mile stone 142. Proceedings under the Land Acquisition Act, 1894, for the

acquisition of about 27 bighas of land in Bhagatdih mouza and 31 bighas of land in Burra Dhemo mouza were instituted without delay and in both cases the respective Provincial Governments permitted the proceedings to be expedited by summary acquisition procedure under Section 17 of the Act.

Detailed building plans, specifications, bills of quantities, conditions of contract, etc., were prepared and on the 15th November, the contract for the construction of the Rescue Station in the Jharia coalfield was accorded to Messrs. J. C. Banerjee, Limited, of Calcutta.

Tenders for the construction of the Rescue Station in the Raniganj coalfield were called for and construction of the station is about to be commenced.

Labour Inquiry Committee.

In my last report reference was made to the appointment of the Labour Inquiry Committee by the Hon'ble Prime Minister for Bihar under a resolution passed by the Bihar Legislative Assembly on 3rd September 1937. The Committee is expected to publish its report in the near future.

Labour Associations.

(a) *The Indian Colliery Labour Union.*

This Union is registered under the Indian Trade Union Act, 1926, and its headquarters are at Jharia. The number of members on the roll is given as 8,579, consisting chiefly of miners and skilled and unskilled labourers at mines. The rates of subscription are given as from three pies to four annas per month. It is claimed that the Union has assisted members in compensation claims and wage disputes. Lantern lectures were given during the year on welfare schemes.

(b) *The Indian Miners' Association.*

The Indian Miners' Association is registered under the Indian Trade Union Act and is affiliated with the National Trade Union Federation, Bombay. The membership at the end of the year was 7,000. The members are chiefly miners and other manual workers at mines. The rates of subscription vary from one anna to four annas per member according to the scale of pay. The Association conducted meetings and lantern lectures on general education, hygiene and temperance, etc. The Association has assisted its members in wage disputes and claims for compensation.

(c) *The Tata's Collieries Labour Association.*

This Association is registered under the Indian Trade Union Act. The number of members is given as 2,023, consisting chiefly of miners and skilled and unskilled labourers. The rates of subscription are given as from one anna to Re. 1-8 per month according to the scale of wages.

Visitors to the Coalfields.

The Hon'ble Dr. Saiyid Mahmud, Minister for Education and Development, Bihar, visited the Jharia coalfield on the 7th and 8th January.

His Excellency Sir Maurice Hallett, K. C. S. I., C. I. E., I. C. S., Governor of Bihar, accompanied by the Deputy Commissioner, Hazaribagh, and the Chief Mining Engineer, Railway Board, visited Kargali and Bokaro collieries on the 24th January, and inspected the quarries, power house, surface plant and new houses for workers.

The Labour Inquiry Committee appointed by the Hon'ble Prime Minister of Bihar visited the Jharia coalfield from 12th to 15th February and held informal discussions with the representatives of the Indian Mining Association, Indian Mining Federation and the Indian Colliery Owners' Association and of labour. During their visit the Committee visited a number of collieries and had discussions with Government officials and representatives of the various Mining Associations.

The Hon'ble Mr. Anugrah Narain Sinha, Minister for Finance and Local Self-Government, Bihar, visited the Jharia coalfield from the 10th July to the 13th July. On the 11th July, the Hon'ble Minister visited Tetulmari Leper Hospital and the Topchanchi Water Works; on the 12th July, East Ena and Pure Jharia collieries and in the afternoon the Indian School of Mines.

The Hon'ble Mr. Jaglal Chaudhuri, Minister for Excise and Public Health, Bihar, visited the Jharia coalfield from the 10th to the 12th August.

Official duties, 1939.

Mr. W. Kirby was Chief Inspector of Mines throughout the year.

Mr. N. Barraclough, Inspector of Mines, held charge of No. 1 Circle, throughout the year.

Mr. G. S. Cameron, Inspector of Mines, held charge of No. 2 Circle, from 1st January to 12th May. He was on leave throughout the remainder of the year.

Mr. N. G. Chatterjee was Inspector of Mines without circle from the 1st January to 12th May, and held charge of No. 2 Circle from the 13th May.

Rai Bahadur H. M. Mitra was Electric Inspector of Mines throughout the year.

Mr. H. K. Chatterjee, Junior Inspector of Mines, was on duty throughout the year.

Mr. S. S. Grewal, Junior Inspector of Mines, was on duty throughout the year.

Mr. V. S. Chopra, Junior Inspector of Mines, was on leave from 27th March to 6th April.

Mr. G. S. Jabbi, Assistant Inspector of Mines, was promoted to be a Junior Inpector of Mines from 22nd January. He was on leave from the 25th September to 16th October.

Mr. M. Yasin, Assistant Inspector of Mines, was on leave from the 6th November to 5th December.

Mr. I. J. Badhwar was appointed to be an Assistant Inspector of Mines from the 1st October.

The number of coal mines worked during the year was 619, which is 46 less than in the previous year. The number of metalliferous (including stone etc.) mines at work was 1,245 as compared with 1,288 in 1938.

During the year 1,210 mines were inspected, many of them being inspected several times. 2,947 separate inspections were made. The cause and circumstances of nearly all fatal accidents and serious accidents of importance, and all complaints of breaches of regulations and rules were investigated. Many inspections were made at the invitation of mine-owners, superintendents and managers desirous of obtaining advice on safety matters. In the major coalfields a large portion of the time of the Inspectors was occupied in investigating cases of actual or threatened damage to dwellings and roads by reason of the underground working of coal mines, in dealing with underground fires and in examining protective works against the risk of inundation. In addition a large number of inspections of the sanitary conditions at mines were made by medical officers as *Ex-officio* Inspectors of Mines.

Orders were issued and withdrawn as follows :—

Section, Regulation or Rules.	Orders issued.	Orders withdrawn
Under Section 19 (1)	2	2
Under Section 19 (2)	17	4
Under Section 19 (1-A)	1	..

Exemptions, partial or complete, and permissions were granted and withdrawn as follows :—

Regulation.	Number of cases.	Number withdrawn.
Under Coal Mines Regulation 53	1	..
Under Coal Mines Regulation 76 (2)	7	..
Under Coal Mines Regulation 87-H	1	..
Under Coal Mines Regulation 77 (4)	15	..
Under Coal Mines Regulation 93	1	..
Under Coal Mines Regulation 116	5	..
Under Coal Mines Regulation 123	1	..
Under Metalliferous Mines Regulation 55 . . .	1	..
Under Metalliferous Mines Regulation 74 . . .	1	..

Information was received of fifteen dangerous occurrences underground none of which involved loss of life. Five of these were due to outbreak of fire at several old fire areas; eight to spontaneous heating; one to an irruption of water; and one to a small " blower " of gas being ignited by an open light.

The number of original cases under the Land Acquisition (Mines) Act, 1885, at the end of 1939, stood at 765, thirteen of which were cases dealt with during the year. There were twenty-two applications for modifications of restrictions, and eight complaints of violations of restrictions, all of which were dealt with. The Act applies to Bengal, Bihar and Orissa only. In other provinces where Government owns the minerals, Provincial Governments were advised as to the restrictions necessary in cases where mine-owners sought permission to work minerals beneath railways, villages, etc.

I have the honour to be,

Sir,

Your most obedient servant,

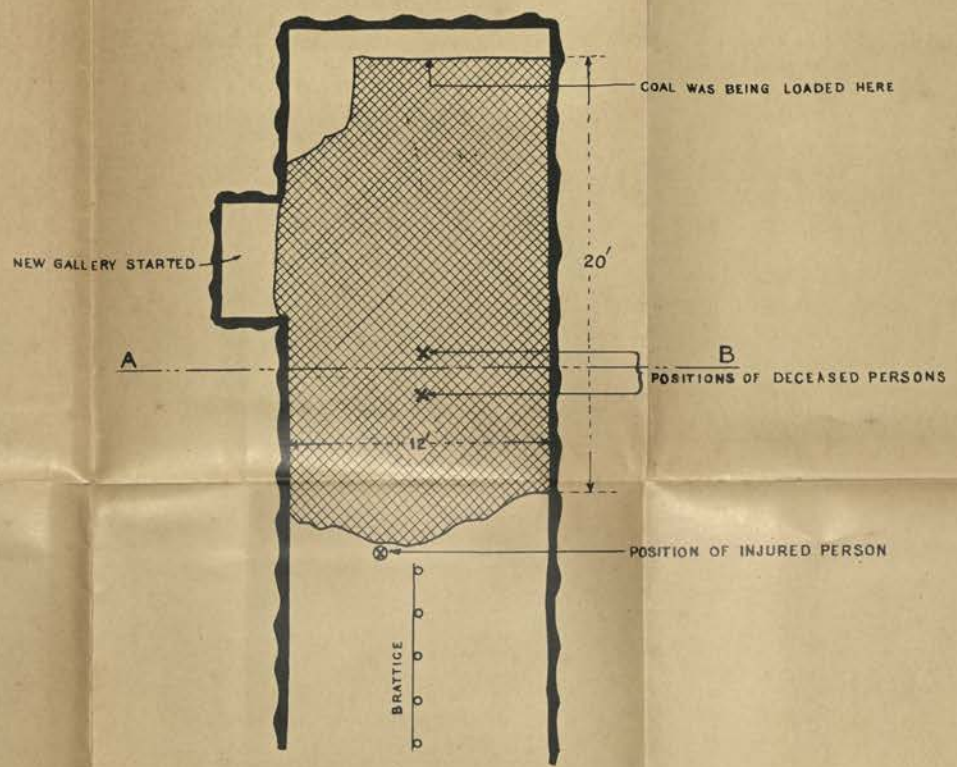
W. KIRBY,

Chief Inspector of Mines in India.

PLAN No. 1.

PLAN & SECTION ILLUSTRATING REPORT ON
FATAL ACCIDENT BY FALL OF ROOF
AT
THE EASTERN COAL Co. LTD'S. AMLABAD MINE.

SCALE:- 1 INCH = 5 FEET.



PLAN.

SECTION ON A. B.

REFERENCES.

AREA OF ROOF WHICH FELL
POSITIONS OF DECEASED PERSONS
POSITION OF INJURED PERSON
PROP

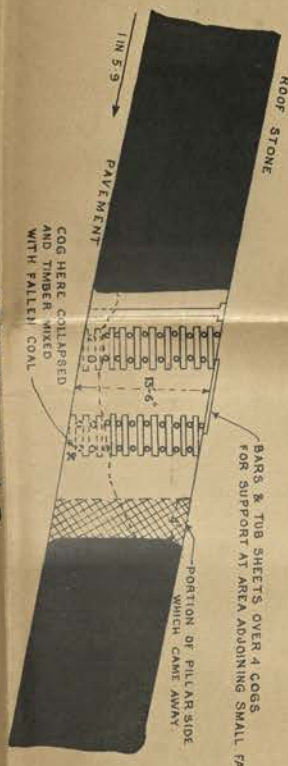
REG. NO. 2986 E'33—1,270'40.

VANDYKED AT THE SURVEY OF INDIA OFFICES, CALCUTTA.

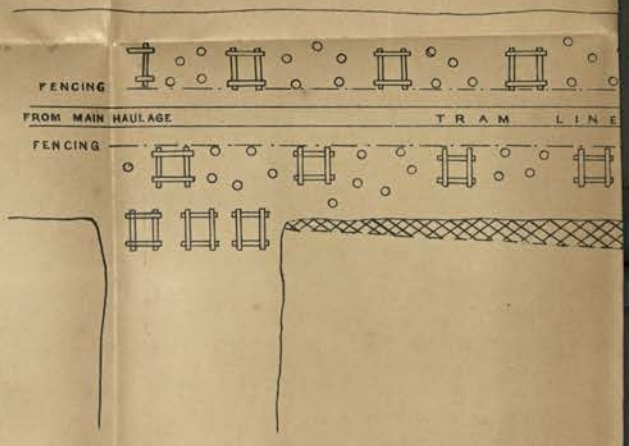
PLANS & SECTION

FATAL ACCIDE

THE DHEMO MAIN COL


1 IN 5·9
ROOF STONE
PAVEMENT
COG HERE COLLAPSED AND TIMBER MIXED WITH FALLEN COAL
15'-6"
BARS & TUB SHEETS OVER 4 COGS FOR SUPPORT AT AREA ADJOINING SMALL FAULT
PORTION OF PILLAR SIDE WHICH CAME AWAY

SECTION ON A B.



REFERENCES

AREA OF COAL WHICH FELL

SITE OF ACCIDENT

COGS SHOWN THUS

PROPS " "

REG. NO. 2986 E'33—1,270'40.

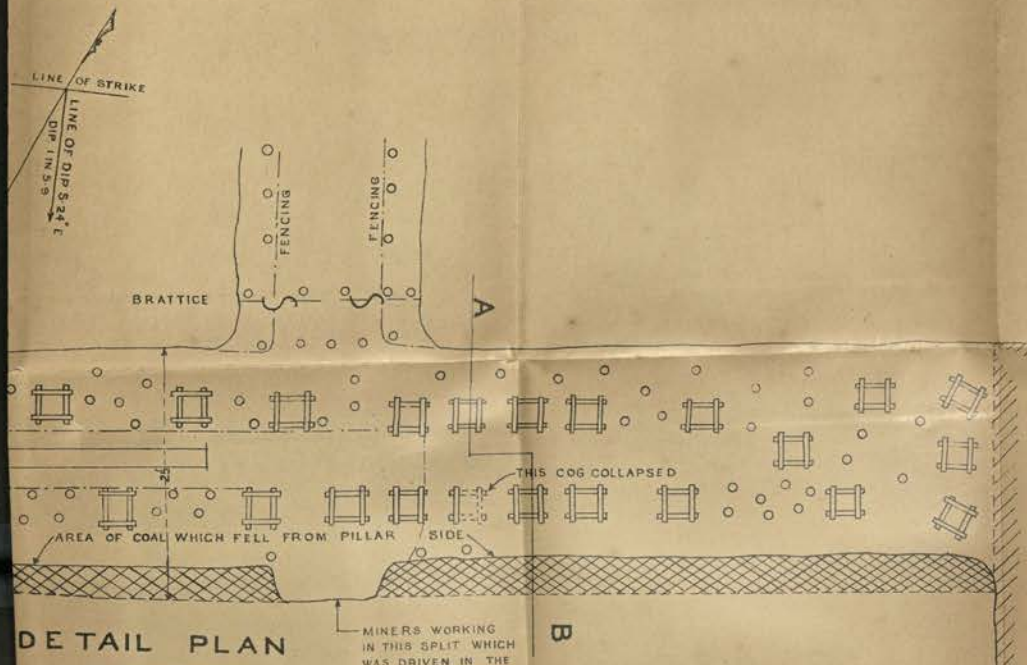
PLAN No. 2.

LLUSTRATING REPORT ON

NT BY FALL OF SIDE

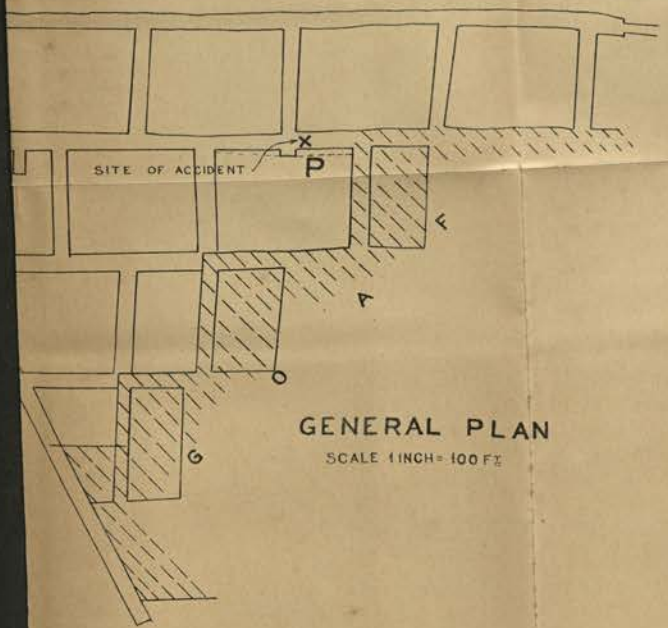
AT

LIERIES LTD'S DHEMO MAIN MINE.



DETAIL PLAN

SCALE 1 INCH = 10 FEET.



GENERAL PLAN

SCALE 1 INCH = 100 FT.

VANDYKED AT THE SURVEY OF INDIA OFFICES, CALCUTTA.

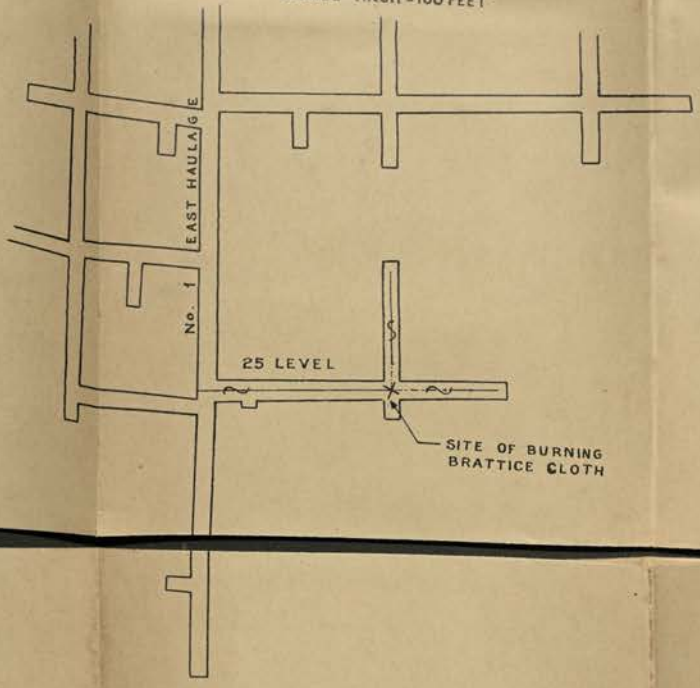
PLANS

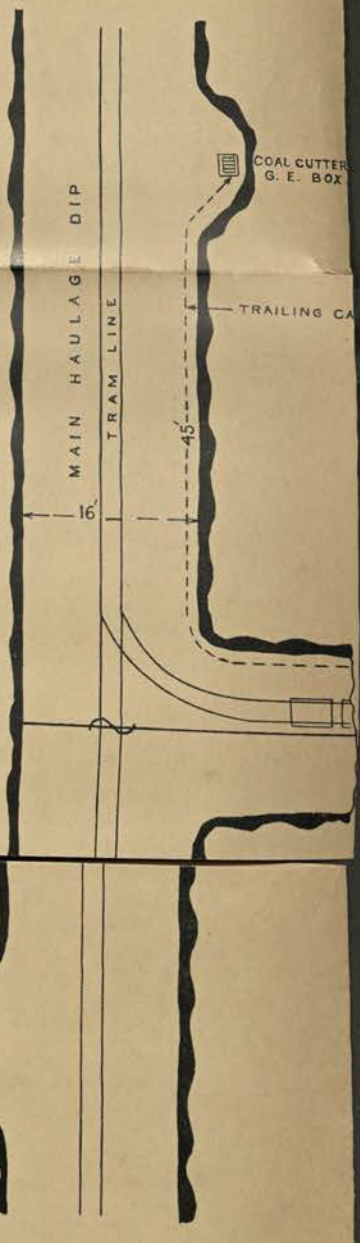
FATAL ACCI

THE ALDIH

GENERAL PLAN.

SCALE 1 INCH = 100 FEET





REG. NO. 2986 E'33—1,270'40.

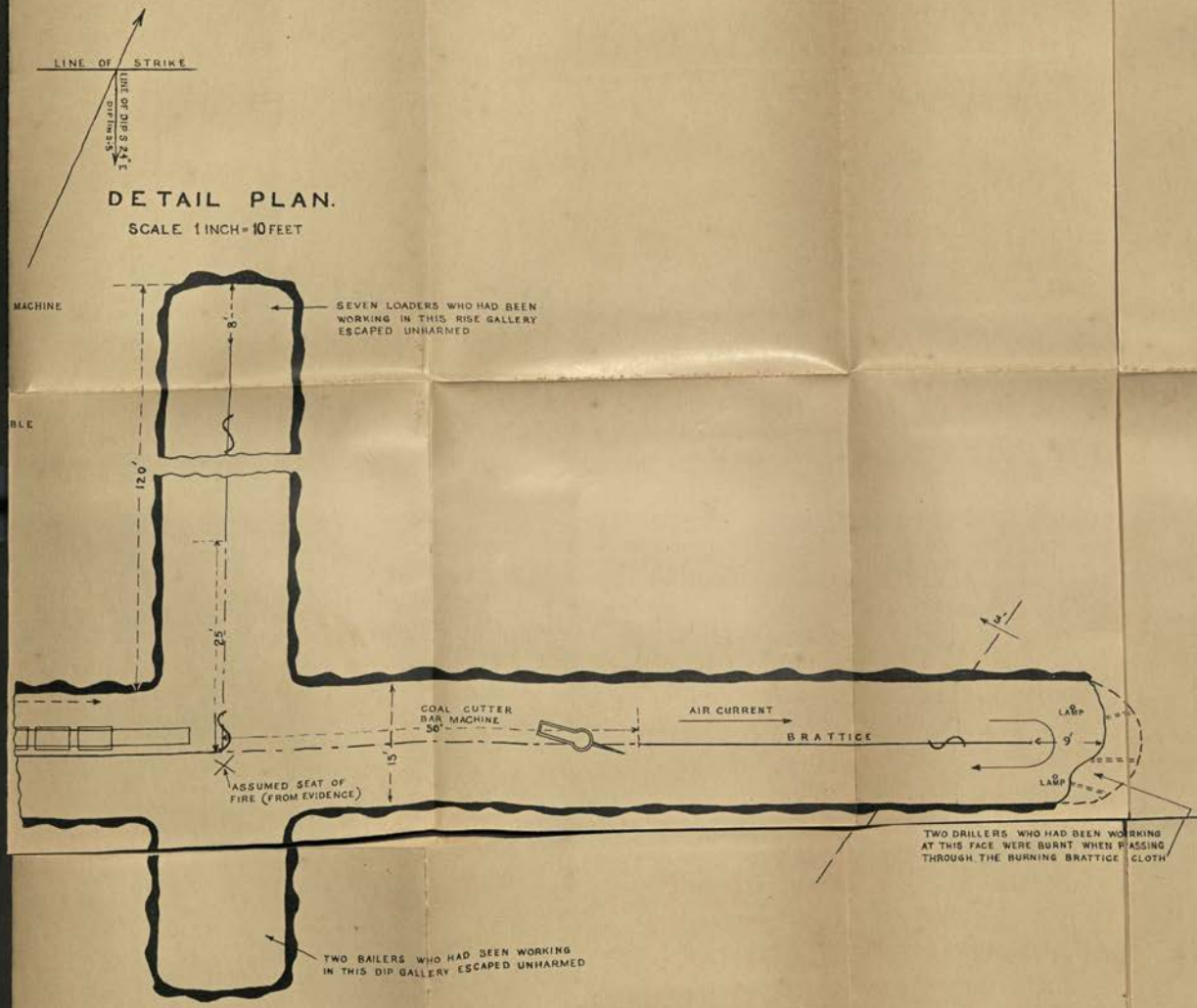
PLAN No. 3.

ILLUSTRATING REPORT ON

DENT BY UNDERGROUND FIRE

AT

COAL Co. LTD'S. METHANI MINE.



NOTE:—

EXTENT OF BRATTICE CLOTH BURNT SHOWN THUS .....—·—·—

VARGYKED AT THE SURVEY OF INDIA OFFICES, CALCUTTA.

APPENDIX I.

Statistics of Mines and Minerals.

APPEN

STATISTICS OF MINES.

Table

Number of workers and output of minerals during the

Province.	District and Mineral field.	Total output. Tons.	AVERAGE NUMBER OF — UNDERGROUND. Males. Overmen and Sirdars.	Coal-cutters.	Loaders.	Other skilled labour.	Other unskilled labour.	Total Males.	OPEN Overmen and Sirdars.	Coal-cutters.
Assam	Khasi and Jaintia Hills.	Tons 10,126	3	30	15	3	2	53	..	CO ..
	Lakhimpur, Makum Coalfield.	238,102	79	278	343	310	358	1,368	3	5
	Naga Hills, Nazira Coalfield.	26,300	10	50 ..	33	63	80	236	..	..
	Total .	274,528	92	358	391	376	440	1,657	3	5
Baluchistan	Quetta Pishin, Sor Range Coalfield.	9,308	7	30	77	14	1	138	..	..
	Sibi, Khost Coalfield.	6,905	14	64	86	21	2	187	..	..
	Total .	16,213	21	103	163	35	3	325	..	..
Bengal	Bankura (Raniganj Coalfield.)	4,943	3	18	19	2	10	52	1	6
	Birbhum (Raniganj Coalfield.)	1,366	2	6	9	..	2	19	..	..
	Burdwan (Raniganj Coalfield.)	7,585,186	1,042	16,066	9,193	4,848	8,852	39,001	17	116
	Total .	7,591,495	1,047	16,090	9,221	4,850	8,864	40,072	18	122
Bihar	Manbhum—									
	Raniganj Coalfield (part of).	877,785	146	2,418	1,015	585	1,353	5,517	9	114
	Jharia Coalfield.	10,444,486	1,402	19,893	16,238	6,023	10,946	54,502	115	1,272
	Hazaribagh—									
	Jharia Coalfield (part of)	84,673	17	189	188	37	42	473	2	20
	Bokaro Coalfield.	1,983,564	102	1,192	807	251	815	3,167	82	2,362
	Giridih Coalfield.	695,879	125	2,939	909	233	707	4,913	1	5
	Karanpura Coalfield.	545,293	33	523	357	139	270	1,322	2	327

DIX I.

AND MINERALS.

No. 1.

year 1939 at mines under the Indian Mines Act.

PERSONS EMPLOYED DAILY IN AND ABOUT THE MINES.

WORKINGS.							SURFACE.						
Males.							Males.						
Loaders.	Other skilled labour.	Other unskilled labour.	Total Males.	Females.	Total Males and Females.	Total Underground and open workings.	Clerical and supervising staff.	Skilled labour.	Unskilled labour.	Total Males.	Females.	Total Males and Females.	GRAND TOTAL.
AL.													
..	..	..	..	..	..	53	5	1	54	60	25	85	138
16	11	12	47	19	66	1,434	52	180	204	436	127	563	1,997
..	..	..	..	..	..	236	11	31	50	92	..	92	328
16	11	12	47	19	66	1,723	68	212	308	588	152	740	2,463
..	..	..	..	..	..	138	2	..	12	14	..	14	152
..	..	..	..	..	..	187	..	4	10	14	..	14	201
..	..	..	..	..	..	325	2	4	22	28	..	28	353
5	2	3	17	3	20	72	6	4	9	19	5	24	96
..	..	..	..	..	..	19	2	2	2	6	1	7	26
31	31	216	411	162	573	40,574	1,742	3,539	7,647	12,928	6,008	18,936	59,510
36	33	219	428	165	593	40,665	1,750	3,545	7,658	12,953	6,014	18,967	59,632
39	19	79	260	140	400	5,917	231	447	919	1,597	792	2,389	8,306
365	189	784	2,725	1,301	4,026	58,528	2,259	5,115	12,712	20,086	8,790	28,876	87,404
2	...	25	49	18	67	540	49	67	111	227	112	339	879
612	185	1,671	4,912	2,101	7,013	10,180	243	527	1,282	2,052	391	2,443	12,623
..	3	..	9	8	17	4,930	95	186	663	944	497	1,441	6,371
79	316	372	1,096	391	1,487	2,809	65	333	395	793	135	928	3,737

APPEN

STATISTICS OF MINES

Table

Number of workers and output of minerals during the

Province.	District and Mineral field.	Total output.	AVERAGE NUMBER OF							
			UNDERGROUND.						OPEN	
			Males.							
		Tons.	Overmen and Sirdars.	Coal-cutters.	Loaders.	Other skilled labour.	Other unskilled labour.	Total Males.	Overmen and Sirdars.	Coal-cutters.
		Tons								COAL
Bihar—*contd.*	Palamau—									
	Daltonganj	17,090	3	46	23	6	22	100	..	..
	Ranchi—									
	Karanpura Coalfield (part of).	21,592	4	76	40	15	15	150	..	..
	Sonthal Parganas—									
	Jainty Coalfield.	41,358	17	196	102	38	77	430	..	..
	Raniganj Coalfield (part of).	73,226	18	281	40	35	60	434	2	33
	Total	14,784,946	1,867	27,753	19,719	7,362	14,307	71,008	213	4,133
Central Provinces.	Betul	3,794	2	22	14	5	7	50	..	..
	Chanda	291,639	37	856	720	122	388	2,123	..	..
	Chhindwara, Pench Valley Coalfield.	1,415,562	160	3,181	1,776	920	1,039	7,076	5	145
	Yeotmal	31,836	4	166	67	37	63	337	..	..
	Total	1,742,831	203	4,225	2,577	1,084	1,497	9,586	5	145
N. W. F. Province.	Hazara	8	1	1	..	..	3	5	..	..
Orissa	Sambalpur, Hingir Rampur Coalfield.	58,687	8	116	115	40	16	295	..	..
Punjab	Attock	..	2	..	..	2	9	13	..	..
	Jhelum	68,998	57	312	184	157	300	1,010	..	..
	Mianwali	117,374	32	217	203	41	163	656	..	16

DIX 1—*contd.*

AND MINERALS—*contd.*

No. 1—*contd.*

year 1939 at mines under the Indian Mines Act—*contd.*

PERSONS EMPLOYED DAILY IN AND ABOUT THE MINES.

WORKINGS.							SURFACE.						
Males.							Males.						
Loaders.	Other skilled labour.	Other unskilled labour.	Total Males.	Females.	Total Males and Females.	Total Underground and open workings.	Clerical and supervising staff.	Skilled labour.	Unskilled labour.	Total Males.	Females.	Total Males and Females.	GRAND TOTAL.
—*contd.*													
..	..	..	..	..	..	100	3	26	36	65	11	76	176
..	..	..	..	..	..	150	10	17	54	81	45	126	276
..	..	..	..	..	..	430	23	51	135	209	65	274	704
12	20	9	76	26	102	536	36	41	79	156	46	202	738
1,099	732	2,940	9,127	3,985	13,112	84,120	3,014	6,810	4,586	26,210	10,884	37,094	121,214
..	..	..	..	..	..	50	7	10	19	36	8	44	94
..	..	..	..	..	..	2,123	76	85	383	544	167	711	2,834
86	42	279	557	465	1,022	8,098	220	967	1,224	2,411	979	3,390	11,488
..	..	..	..	..	..	337	10	34	56	100	16	116	453
86	42	279	557	465	1,022	10,608	313	1,096	1,682	3,091	1,170	4,661	14,869
..	..	..	..	..	..	5	1	1	..	2	..	2	7
..	..	..	..	..	..	295	10	44	104	158	123	281	576
..	..	..	..	..	..	13	2	..	..	2	..	2	15
..	5	8	13	..	13	1,023	123	159	203	485	..	485	1,508
..	..	..	16	..	16	672	63	33	386	482	27	509	1,181

APPEN

STATISTICS OF MINES

Table

Number of workers and output of minerals during the

Province.	District and Mineral field.	Total output.	AVERAGE NUMBER OF							
			UNDERGROUND.						OPEN	
			Males.							
			Overmen and Sirdars.	Coal-cutters.	Loaders.	Other skilled labour.	Other unskilled labour.	Total Males.	Overmen and Sirdars.	Coal-cutters.
		Tons								COAL
Punjab—*contd.*	Rawalpindi .	..	2	..	..	1	9	12	..	..
	Shahpur . .	7,708	3	43	..	10	20	85	..	..
	Total .	194,080	96	572	387	214	510	1,776	..	16
	Grand Total (Coal) for 1930.	24,662,788	3,335	47,218	32,573	13,953	25,640	124,724	239	4,421
	Grand Total of preceding year.	25,276,743	3,207	48,275	30,794	14,000	23,824	120,100	289	5,400
	Difference .	—613,955	+128	—1,057	+1,779	—48	+1,816	+4,528	—50	—1,089

DIX I—*contd.*

AND MINERALS—*contd.*

No. 1—*contd.*

year 1939 at mines under the Indian Mines Act—*contd.*

PERSONS EMPLOYED DAILY IN AND ABOUT THE MINES.

WORKINGS.							SURFACE.						
Males.							Males.						
Hewers.	Other skilled labour.	Other unskilled labour.	Total Males.	Females.	Total Males and Females.	Total Underground and open workings.	Clerical and supervising staff.	Skilled labour.	Unskilled labour.	Total Males.	Females.	Total Males and Females.	GRAND TOTAL.
—*concld.*													
..	..	..	..	..	..	12	1	..	..	1	..	1	13
..	..	..	..	..	..	85	9	4	60	73	..	73	158
..	5	8	20	..	20	1,805	198	196	649	1,043	27	1,070	2,875
1,237	823	3,458	10,188	4,634	14,822	139,546	5,350	11,908	15,009	44,073	18,370	62,443	201,989
1,441	1,187	4,505	12,822	5,041	18,823	139,019	5,333	11,996	27,171	44,500	17,574	62,074	201,093
—204	—364	—1,047	—2,634	—1,307	—4,001	+527	+23	—88	—12,162	—427	+796	+369	+896

APPEN

STATISTICS OF MINES

Table

Number of workers and output of minerals during the

Province.	District and Mineral Field.	Total output.	AVERAGE NUMBER OF						
			UNDERGROUND.					OPEN	
			Males.						
			Foremen and Mates.	Miners.	Other skilled labour.	Other unskilled labour.	Total Males.	Foremen and Mates.	Miners.
		Tons.							IRON
Bihar . .	Singhbhum	1,543,034	..	..	..	..	..	278	3,175
	Total of preceding year.	1,421,090	..	..	..	..	..	253	3,345
	Difference .	+122,844	..	..	..	..	..	+25	—170
								MAN	GANESE
Bihar . .	Singhbhum	35,803	..	..	..	..	..	30	369
Bombay .	North Kanara	4,711	..	..	..	..	..	5	207
	Panch Mahals	47,838	8	190	5	2	205	23	590
	Total	52,549	8	190	5	2	205	28	797
Central Provinces.	Balaghat . .	298,048	23	400	5	140	568	230	3,217
	Bhandara . .	123,432	5	32	2	19	58	93	1,729
	Chhindwara .	11,870	..	..	..	..	..	17	166
	Nagpur . .	112,078	8	164	8	2	182	146	2,412
	Total .	546,028	36	596	15	161	808	486	7,524

DIX I—*contd.*

AND MINERALS—*contd.*

No. 1—*contd.*

year 1939 at mines under the Indian Mines Act—*contd.*

PERSONS EMPLOYED DAILY IN AND ABOUT THE MINES.

WORKINGS.						SURFACE.						
Males.						Males.						
Other skilled labour.	Other unskilled labour.	Total Males.	Females.	Total Males and Females.	Total Underground and open workings.	Clerical and supervising staff.	Skilled labour.	Unskilled labour.	Total Males.	Females.	Total Males and Females.	GRAND TOTAL.
ORE.												
403	1,301	5,157	2,053	7,210	7,210	260	333	811	1,404	241	1,645	8,855
449	1,257	5,304	2,100	7,404	7,404	252	405	1,028	1,685	577	2,262	9,666
—46	+44	—147	—47	—194	—194	+8	—72	—217	—281	—336	—617	—811
ORE.												
5	18	422	313	735	735	16	7	16	39	47	86	821
..	6	218	93	311	311	4	19	53	76	90	166	477
17	11	641	326	967	1,172	18	64	321	403	181	584	1,756
17	17	859	419	1,278	1,483	22	83	374	479	271	750	2,233
29	823	4,299	3,753	8,052	8,620	74	95	958	1,127	1,312	2,439	11,059
..	156	1,978	1,773	3,751	3,809	41	40	286	367	239	606	4,415
36	..	219	305	524	524	3	12	..	15	16	31	555
73	136	2,767	2,767	5,534	5,716	55	32	369	456	226	682	6,398
138	1,115	9,263	8,598	17,861	18,069	173	179	1,613	1,965	1,793	3,758	22,427

APPEN

STATISTICS OF MINES

Table

Number of workers and output of minerals during the

Province.	District and Mineral Field.	Total output.	AVERAGE NUMBER OF						
			UNDERGROUND.					OPEN	
			Males.						
			Foremen and Mates.	Miners.	Other skilled labour.	Other unskilled labour.	Total Males.	Foremen and Mates.	Miners.
		Tons							MANGANESE
Madras . .	Vizagapatam .	34,640	..	..	..	..	..	22	1,272
	Grand Total (Manganese Ore) for 1939.	669,020	44	786	20	163	1,013	566	9,962
	Grand Total of preceding year.	766,341	32	718	13	201	964	648	11,854
	Difference . .	—97,321	+12	+68	+7	—38	+49	—82	—1,892
		Oz.							GO
Bihar . .	Manbhum . .	..	..	..	..	..	..	5	6
	Singhbhum .	..	1	..	..	5	6	..	..
	Total Gold for 1939.	..	1	..	..	5	6	5	6
	Total of preceding year.	16	..	4	..	..	4	2	11
	Difference . .	—16	+1	—4	..	+5	+2	+3	—5
		Tons							CHROMITE
Baluchistan .	Zhob . . .	13,952	5	57	..	..	62	4	97

DIX I—*contd.*

AND MINERALS—*contd.*

No. 1—*contd.*

year 1939 at mines under the Indian Mines Act—*contd.*

PERSONS EMPLOYED DAILY IN AND ABOUT THE MINES.

WORKINGS.						SURFACE.						
Males						Males.						
Other skilled labour.	Other unskilled labour.	Total Males.	Females.	Total Males and Females.	Total Underground and open workings.	Clerical and supervising staff.	Skilled labour.	Unskilled labour.	Total Males.	Females.	Total Males and Females.	GRAND TOTAL.
ORE—*contd.*												
12	14	1,320	528	1,848	1,848	12	35	54	101	22	123	1,971
172	1,164	11,864	9,858	21,722	22,735	223	304	2,057	2,584	2,133	4,717	27,452
267	1,664	14,433	11,796	26,229	27,193	212	303	2,196	2,711	2,388	5,099	32,292
—95	—500	—2,569	—1,938	—4,507	—4,458	+11	+1	—139	—127	—255	—382	—4,840
LD.												
2	2	15	..	15	15	5	15	35	55	62	117	132
..	4	4	..	4	10	1	..	..	1	..	1	11
2	6	19	..	19	25	6	15	35	56	62	118	143
2	3	18	..	18	22	3	7	40	50	57	107	129
..	+3	+1	..	+1	+3	+3	+8	—5	+6	+5	+11	+14
ORE.												
3	12	116	..	116	178	4	2	80	86	..	86	264

APPEN

STATISTICS OF MINES

Table

Number of workers and output of minerals during the

Province.	District and Mineral Field.	Total output.	AVERAGE NUMBER OF						
			UNDERGROUND.					OPEN	
			Males.						
			Foremen and Mates.	Miners.	Other skilled labour.	Other unskilled labour.	Total Males.	Foremen and Mates.	Miners.
		Tons							CHROMITE
Bihar . .	Singhbhum .	4,476	..	..	..	..	..	25	297
	Grand Total (Chromite Ore) for 1939.	18,428	5	57	..	..	62	29	394
	Grand Total of preceding year.	27,086	1	17	..	..	18	54	482
	Difference . .	—8,658	+4	+40	..	..	+44	—25	—88
									COPPER
Bihar . .	Singhbhum .	360,216	3	..	498	1,341	1,842	..	..
Central Provinces.	Jubbulpore .	..	..	..	..	..	..	3	..
	Grand Total (Copper Ore) for 1939.	360,216	3	..	498	1,341	1,842	3	..
	Total of preceding year.	288,076	3	414	5	1,060	1,482	..	..
	Difference . .	+72,140	..	—414	+493	+281	+360	+3	..
									MI
Bengal . .	Bankura . .	Cwt. 15	..	..	..	..	..	..	..

DIX I—*contd.*

AND MINERALS—*contd.*

No. 1—*contd.*

year 1939 at mines under the Indian Mines Act—*contd.*

PERSONS EMPLOYED DAILY IN AND ABOUT THE MINES.												
WORKINGS.						SURFACE.						
Males.						Males.						
Other skilled labour.	Other unskilled labour.	Total Males.	Females.	Total Males and Females.	Total Underground and open workings.	Clerical and supervising staff.	Skilled labour.	Unskilled labour.	Total Males.	Females.	Total Males and Females.	GRAND TOTAL.
ORE—*contd.*												
13	22	357	364	721	721	10	1	10	21	29	50	771
16	34	473	364	837	899	14	3	90	107	29	136	1,035
18	37	591	370	961	979	19	6	142	167	8	175	1,154
—2	—3	—118	—6	—124	—80	—5	—3	—52	—60	+21	—39	—119
ORE.												
..	..	..	..	..	1,842	57	356	604	1,017	226	1,243	3,085
..	..	3	2	5	5	1	..	1	2	..	2	7
..	..	3	2	5	1,847	58	356	605	1,019	226	1,245	3,092
..	..	..	..	..	1,482	49	272	626	947	308	1,255	2,737
..	..	+3	+2	+5	+365	+9	+84	—21	+72	—82	—10	+355
CA.												
..	23	23	39	62	62	4	..	1	5	..	5	67

APPEN

STATISTICS OF MINES

Table

Number of workers and output of minerals during the

Province.	District and Mineral Field.	Total output.	AVERAGE NUMBER OF						
			UNDERGROUND.					OPEN	
			Males.						
			Foremen and Mates.	Miners.	Other skilled labour.	Other unskilled labour.	Total Males.	Foremen and Mates.	Miners.
		Cwt.							MI
Bihar	Bhagalpur	101	3	15	..	9	27	3	17
	Gaya	13,453	68	933	343	899	2,243	22	481
	Hazaribagh	69,452	690	6,454	1,427	3,730	12,301	169	1,975
	Manbhum	238	..	..	..	..	..	4	33
	Monghyr	2,418	29	264	74	341	708	5	90
	Total	85,662	790	7,666	1,844	4,979	15,279	203	2,596
Madras	Nellore*	22,429	118	694	874	534	2,220	86	311
	Nilgiris	107	2	11	2	11	26	..	..
	Salem*	112	6	..	84	44	134	2	..
	Total	22,648	126	705	960	589	2,380	88	311
Rajputana	Ajmer-Merwara *	2,388	9	123	20	57	209	38	467
	Grand Total (Mica) for 1930.	110,714	925	8,494	2,824	5,625	17,868	329	3,374
	Grand Total of preceding year.	108,835	929	8,629	2,398	4,868	16,824	311	3,150
	Difference	+1,879	—4	—135	+426	+757	+1,044	+18	+224

* 14,926 cwt. of waste mica useful

DIX I—*contd.*

AND MINERALS—*contd.*

No. 1—*contd.*

year 1939 at mines under the Indian Mines Act—*contd.*

PERSONS EMPLOYED DAILY IN AND ABOUT THE MINES.												
WORKINGS.						SURFACE.						
Males.						Males.						GRAND TOTAL.
Other skilled labour.	Other unskilled labour.	Total Males.	Females.	Total Males and Females.	Total Underground and open workings.	Clerical and supervising staff.	Skilled labour.	Unskilled labour.	Total Males.	Females.	Total Males and Females.	
CA—*contd.*												
..	19	39	13	52	79	1	..	..	1	..	1	80
136	215	854	14	868	3,111	239	114	61	414	40	454	3,565
273	735	3,125	165	3,317	15,618	795	1,299	749	2,843	383	3,226	18,844
8	16	61	57	118	118	7	..	..	7	4	11	129
32	93	220	25	245	953	45	117	92	254	71	325	1,278
449	1,078	4,326	274	4,600	19,879	1,087	1,530	902	3,519	498	4,017	23,896
323	519	1,239	1,098	2,337	4,557	145	444	288	877	1,151	2,028	6,585
..	..	..	..	..	26	1	6	5	12	..	12	38
17	4	23	10	33	167	5	59	11	75	14	89	256
340	523	1,262	1,108	2,370	4,750	151	509	304	964	1,165	2,129	6,879
25	101	631	250	881	1,090	16	143	20	179	.	179	1,269
814	1,725	6,242	1,671	7,913	25,781	1,258	2,182	1,227	4,667	1,663	6,330	32,111
694	1,605	5,760	1,264	7,024	23,848	1,061	2,023	1,207	4,361	1,950	6,311	30,159
+120	+120	+482	+407	+889	+1,033	+197	+159	+20	+306	—287	+19	+1,952

for splitting was also raised.

APPEN

STATISTICS OF MINES

Table

Number of workers and output of minerals during the

Province.	District and Mineral Field.	Total output. Tons.	AVERAGE NUMBER OF						
			UNDERGROUND.					OPEN	
			Males.						
			Foremen and Mates.	Miners.	Other skilled labour.	Other unskilled labour.	Total Males.	Foremen and Mates.	Miners.
									SA
Punjab	Jhelum	123,073	30	413	51	161	655	1	..
	Mianwali	14,801	..	116	..	..	116	..	..
	Shahpur	28,076	5	95	6	39	145	..	..
	Grand Total (Salt) for 1939.	165,950	35	624	57	200	916	1	..
	Grand Total of preceding year.	164,674	33	605	55	212	905	1	..
	Difference	+1,276	+2	+19	+2	—12	+11	..	..
									MAGNE
Madras	Salem	29,903	..	..	..	..	..	31	694
	Total of preceding year.	23,052	..	..	..	..	..	21	330
	Difference	+6,851	..	..	..	..	..	+10	+364
									STEA
Bihar	Hazaribagh	822	..	..	..	..	..	..	3
	Singhbhum	133	..	..	..	..	..	2	5
	TOTAL	955	..	..	..	..	..	2	8
Central Provinces.	Jubbulpore	1,670	2	4	3	2	11	10	25

DIX I—*contd.*

AND MINERALS—*contd.*

No. 1—*contd.*

year 1939 at mines under the Indian Mines Act—*contd.*

PERSONS EMPLOYED DAILY IN AND ABOUT THE MINES.

WORKINGS.						SURFACE.						
Males.						Males.						
Other skilled labour.	Other unskilled labour.	Total Males.	Females.	Total Males and Females.	Total Underground and open workings.	Clerical and supervising staff.	Skilled labour.	Unskilled labour.	Total Males.	Females.	Total Males and Females.	GRAND TOTAL.
LT												
..	17	18	..	18	673	1	68	250	319	..	319	992
..	..	..	..	..	116	..	..	77	77	..	77	193
..	..	..	..	..	145	1	8	53	62	..	62	207
..	17	18	..	18	934	2	76	380	458	..	458	1,392
..	21	22	..	22	927	2	130	334	466	..	466	1,393
..	—4	—4	..	—4	+7	..	—54	+46	—8	..	—8	—1
SITE.												
1	1,047	1,773	814	2,587	2,587	18	70	101	189	..	189	2,776
..	636	987	532	1,519	1,519	16	..	1	17	..	17	1,536
+1	+411	+786	+282	+1,068	+1,068	+2	+70	+100	+172	..	+172	+1,240
TITE.												
11	48	62	38	100	100	..	6	..	6	..	6	106
..	..	7	10	17	17	1	..	2	3	4	7	24
11	48	69	48	117	117	1	6	2	9	4	13	130
4	35	74	73	147	158	4	2	14	20	19	39	197

APPEN

STATISTICS OF MINES

Table

Number of workers and output of minerals during the

Province.	District and Mineral Field.	Total output. Tons.	AVERAGE NUMBER OF						
			UNDERGROUND.					OPEN	
			Males.						
			Foremen and Mates.	Miners.	Other skilled labour.	Other unskilled labour.	Total Males.	Foremen and Mates.	Miners.
Madras . .	Nellore . .	70	..	..	..	11	11	..	..
United Provinces.	Hamirpur . .	79	..	15	..	1	16	..	..
	Grand Total (Steatite) for 1939.	2,774	2	19	3	14	38	12	33
	Grand Total of preceding year.	2,297	1	27	..	23	51	2	7
	Difference . .	+477	+1	—8	+3	—9	—13	+10	+26
Bihar . .	Monghyr . .	567	..	..	..	..	..	1	SLA 4
Punjab .	Gurgaon . .	1,631	..	..	..	..	..	8	41
	Kangra . .	6,790	..	..	..	..	..	65	128
	Total .	8,421	..	..	..	..	..	73	169
	Grand Total (Slate) for 1939.	8,988	..	..	..	..	..	74	173
	Grand Total of preceding year.	7,733	..	..	..	..	..	69	158
	Difference . .	+1,255	..	..	..	..	..	+5	+15

DIX I—*contd.*

AND MINERALS—*contd.*

No. 1—*contd.*

year 1939 at mines under the Indian Mines Act—*contd.*

PERSONS EMPLOYED DAILY IN AND ABOUT THE MINES.												
WORKINGS.						SURFACE.						
Males.						Males.						
Other skilled labour.	Other unskilled labour.	Total Males.	Females.	Total Males and Females.	Total Underground and open workings.	Clerical and supervising staff.	Skilled labour.	Unskilled labour.	Total Males.	Females.	Total Males and Females.	GRAND TOTAL.
..	..	..	..	..	11	..	..	..	..	..	..	11
30	..	30	..	30	46	..	42	..	42	..	42	88
45	83	173	121	294	332	5	50	16	71	23	94	426
40	98	147	52	199	250	3	30	3	36	6	42	292
+5	—15	+26	+69	+95	+82	+2	+20	+13	+35	+17	+52	+124
TE.												
7	16	28	3	31	31	..	..	..	..	..	..	31
56	66	165	..	165	165	1	..	2	3	..	3	168
81	123	397	..	397	397	4	2	2	8	..	8	405
137	183	562	..	562	562	5	2	4	11	..	11	573
144	199	590	3	593	593	5	2	4	11	..	11	604
131	178	536	7	543	543	3	2	4	9	..	9	552
+13	+21	+54	—4	+50	+50	+2	..	..	+2	..	+2	+52

APPEN

STATISTICS OF MINES

Table

Number of workers and output of minerals during the

Province.	District and Mineral Field.	Total output.	AVERAGE NUMBER OF						
			UNDERGROUND.					OPEN	
			Males.						
			Foremen and Mates.	Miners.	Other skilled labour.	Other unskilled labour.	Total Males.	Foremen and Mates.	Miners.
		Tons.							LIME
Bihar	Ranchi	12,313	..	..	..	..	..	3	72
	Shahabad	488,051	..	..	..	..	..	99	655
	Total	500,364	..	..	..	..	..	102	727
Central Provinces.	Bilaspur	57,122	..	..	..	..	..	10	89
	Jubbulpore	482,535	..	..	..	..	..	40	690
	Total	539,657	..	..	..	..	..	50	779
Madras	Coimbatore	158,921	..	..	..	..	..	3	239
Punjab	Attock	272,148	..	..	..	..	..	3	22
	Mianwali	33,000	..	..	..	..	..	6	..
	Rawalpindi	6,600	..	..	..	..	..	..	..
	Total	316,748	..	..	..	..	..	9	22
	Grand Total (Limestone) for 1939.	1,515,690	..	..	..	..	..	164	1,767
	Grand Total of preceding year.	1,582,058	..	..	..	..	..	239	1,757
	Difference	—67,568	..	..	..	..	..	—75	+10

DIX I—*contd.*

AND MINERALS—*contd.*

No. 1—*contd.*

year 1939 at mines under the Indian Mines Act—*contd.*

PERSONS EMPLOYED DAILY IN AND ABOUT THE MINES.												
WORKINGS.						SURFACE.						
Males.						Males.						
Other skilled labour.	Other unskilled labour.	Total Males.	Females.	Total Males and Females.	Total Underground and open workings.	Clerical and supervising staff.	Skilled labour.	Unskilled labour.	Total Males.	Females.	Total Males and Females.	GRAND TOTAL.
STONE.												
1	3	79	32	111	111	3	5	2	10	6	16	127
188	820	1,762	518	2,280	2,280	196	198	104	498	25	523	2,803
189	823	1,841	550	2,391	2,391	199	203	106	508	31	539	2,930
178	23	300	121	421	421	6	36	20	62	59	121	542
68	357	1,155	1,380	2,535	2,535	21	5	15	41	10	51	2,586
246	380	1,455	1,501	2,956	2,956	27	41	35	103	69	172	3,128
..	..	242	244	486	486	3	..	..	3	..	3	489
4	418	447	..	447	447	..	..	..	..	..	..	447
..	200	206	8	214	214	..	..	..	..	..	..	214
..	30	30	..	30	30	1	..	..	1	..	1	31
4	648	683	8	691	691	1	..	..	1	..	1	692
439	1,851	4,221	2,303	6,524	6,524	230	244	141	615	100	715	7,239
565	2,690	5,251	3,914	9,165	9,165	285	252	432	969	137	1,106	10,271
—126	—839	—1,030	—1,611	—2,641	—2,641	—55	—8	—291	—354	—37	—391	—3,032

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STATISTICS OF MINES

Table

Number of workers and output of minerals during the

Province.	District and Mineral Field.	Total output.	AVERAGE NUMBER OF						
			UNDERGROUND.					OPEN	
			Males.						
			Foremen and Mates.	Miners.	Other skilled labour.	Other unskilled labour.	Total Males.	Foremen and Mates.	Miners.
		Tons.						STONE (CHIEFLY	
Bengal . .	Birbhum . .	69,664	..	..	..	..	..	1	260
Bihar .	Gaya . .	102,074	..	..	..	..	..	17	300
	Monghyr . .	95,173	..	..	..	..	..	20	..
	Santal Parganas .	404,260	..	..	..	..	..	105	652
	Shahabad . .	79,107	..	..	..	..	..	..	..
	Singhbhum .	52,235	..	..	..	..	..	21	319
	Total .	733,749	..	..	..	..	..	163	1,271
Bombay	Bombay .	20,861	..	..	..	..	..	8	102
	Bombay Suburban	28,370	..	..	..	..	..	..	2
	Kaira . .	29,269	..	..	..	..	..	2	..
	Surat . .	72,237	..	..	..	..	..	10	15
	Thana . .	13,160	..	..	..	..	..	5	..
	Total .	351,655	..	..	..	..	..	25	119
Central Provinces.	Akola . .	22,050	..	..	..	..	..	4	..
	Amraoti . .	16,373	..	..	..	..	..	3	..
	Nagpur . .	21,756	..	..	..	..	..	2	..
	Total .	60,179	..	..	..	..	..	9	..

DIX I—*contd.*

AND MINERALS—*contd.*

No. 1—*contd.*

year 1939 at mines under the Indian Mines Act—*contd.*

PERSONS EMPLOYED DAILY IN AND ABOUT THE MINES.												
WORKINGS.						SURFACE.						
Males.						Males.						
Other skilled labour.	Other unskilled labour.	Total Males.	Females.	Total Males and Females.	Total Underground and open workings.	Clerical and supervising staff.	Skilled labour.	Unskilled labour.	Total Males.	Females.	Total Males and Females.	GRAND TOTAL.
IGNEOUS ROCK).												
7	102	370	..	370	370	36	47	318	401	141	542	912
29	166	512	206	718	718	..	..	..	..	..	..	718
108	433	561	422	983	983	6	2	35	43	..	43	1,026
464	178	1,399	274	1,673	1,673	122	374	371	867	405	1,272	2,945
..	265	265	20	285	285	..	..	..	..	..	..	285
39	429	808	526	1,334	1,334	13	8	36	57	14	71	1,405
640	1,471	3,545	1,448	4,993	4,993	141	384	442	967	419	1,386	6,379
50	177	337	34	371	371	24	5	38	67	28	95	466
14	48	64	..	64	64	2	38	56	96	..	96	160
15	..	17	..	17	17	3	4	21	28	..	28	45
85	152	262	206	468	468	11	3	4	18	..	18	486
..	88	93	55	148	148	5	..	..	5	..	5	153
164	465	778	295	1,068	1,068	45	50	119	214	28	242	1,310
..	73	77	56	133	133	1	..	..	1	..	1	134
90	..	93	45	138	138	1	..	..	1	..	1	139
..	80	82	80	162	162	1	..	..	1	..	1	163
90	153	252	181	433	433	3	..	..	3	..	3	436

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STATISTICS OF MINES

Table

Number of workers and output of minerals during the

Province.	District and Mineral Field.	Total output. Tons.	AVERAGE NUMBER OF						
			UNDERGROUND.					OPEN	
			Males.						
			Foremen and Mates.	Miners.	Other skilled labour.	Other unskilled labour.	Total Males.	Foremen and Mates.	Miners.
									STONE (CHIEFLY
Delhi . .	Delhi . .	77,222	..	..	..	..	..	11	106
Madras .	Chingleput . .	94,302	..	..	..	..	..	..	..
	East Godawari .	9,016	..	..	..	..	..	..	..
	Guntur . .	38,235	..	..	..	..	..	..	16
	Kistna . .	24,031	..	..	..	..	..	..	43
	Total .	165,584	..	..	..	..	..	..	59
Punjab .	Jhang . .	30,531	..	..	..	..	..	7	28
	Jhelum . .	51,220	..	..	..	..	..	5	5
	Total .	81,751	..	..	..	..	..	12	33
Sind . .	Sukkur . .	28,868	..	..	..	..	..	7	54
United Provinces.	Allahabad . .	110,559	..	..	..	..	..	22	..
	Banda . .	640	..	..	..	..	..	..	..
	Jhansi . .	22,433	..	..	..	..	..	12	119
	Total .	133,632	..	..	..	..	..	34	119
	Grand Total (Stone) for 1939.	1,702,304	..	..	..	..	..	262	2,021
	Grand Total of preceding year.	1,456,771	..	..	..	..	..	233	2,095
	Difference .	+245,933	..	..	..	..	..	+29	—74

DIX I—*contd.*

AND MINERALS—*contd.*

No. 1—*contd.*

year 1939 at mines under the Indian Mines Act—*contd.*

PERSONS EMPLOYED DAILY IN AND ABOUT THE MINES.												
WORKINGS.						SURFACE.						
Males.						Males.						
Other skilled labour.	Other unskilled labour.	Total Males.	Females.	Total Males and Females.	Total Underground and open workings.	Clerical and supervising staff.	Skilled labour.	Unskilled labour.	Total Males.	Females.	Total Males and Females.	GRAND TOTAL.
IGNEOUS ROCK)—*contd.*												
31	703	851	356	1,207	1,207	1	..	..	1	..	1	1,208
..	620	620	466	1,086	1,086	3	20	68	91	41	132	1,218
56	..	56	12	68	68	..	..	..	..	..	..	68
11	120	147	18	165	165	..	..	..	..	..	..	165
..	..	43	..	43	43	6	..	55	61	12	73	116
67	740	866	496	1,362	1,362	9	20	123	152	53	205	1,567
1	70	106	22	128	128	..	..	..	..	..	..	128
..	119	129	11	140	140	3	5	16	24	..	24	164
1	189	235	33	268	268	3	5	16	24	..	24	292
..	58	119	21	140	140	..	1	1	2	..	2	142
300	368	690	243	933	933	16	1	..	17	..	17	950
1	5	6	7	13	13	..	..	1	1	..	1	14
125	..	256	43	299	299	6	60	45	111	117	228	527
426	373	952	293	1,245	1,245	22	61	46	129	117	246	1,491
1,426	4,254	7,968	3,123	11,086	11,086	260	568	1,065	1,893	758	2,651	13,737
1,874	2,611	6,813	2,215	9,028	9,028	254	471	1,103	1,828	697	2,525	11,553
—448	+1,643	+1,150	+908	+2,058	+2,058	+6	+97	—38	+65	+61	+126	+2,184

APPEN

STATISTICS OF MINES

Table

Number of workers and output of minerals during the

Province.	District and Mineral Field.	Total output. Tons.	AVERAGE NUMBER OF						
			UNDERGROUND.					OPEN	
			Males.						
			Foremen and Mates.	Miners.	Other skilled labour.	Other unskilled labour.	Total Males.	Foremen and Mates.	Miners.
									SAND
Bihar . .	Shahabad . .	30,888	..	..	..	..	..	8	23
	Total of preceding year.	18,612	..	..	..	..	..	3	..
	Difference .	+12,276	..	..	..	..	..	+5	+23
		Tons.							GRA
Bihar . .	Singhbhum .	14,203						Figures	included
Bombay {	Kaira . .	25,170	..	..	..	..	..	6	..
	Thana . .	481						Figures	included
	Total .	25,651	..	..	..	..	..	..	..
Madras . .	Chingleput . .	13,431						Figures	included
	Grand Total (Gravel) for 1939.	53,285	..	..	..	..	..	6	..
	Grand Total of preceding year.	47,542						Figures	included
	Difference .	+5,743	..	..	..	..	..	+6	..

DIX I—*contd.*

AND MINERALS—*contd.*

No. 1—*contd.*

year 1939 at mines under the Indian Mines Act—*contd.*

PERSONS EMPLOYED DAILY IN AND ABOUT THE MINES.												
WORKINGS.						SURFACE.						
Males.					Total Underground and open workings.	Males.						GRAND TOTAL.
Other skilled labour.	Other unskilled labour.	Total Males.	Females.	Total Males and Females.		Clerical and supervising staff.	Skilled labour.	Unskilled labour.	Total Males.	Females.	Total Males and Females.	
STONE.												
..	100	131	49	180	180	3	..	..	3	..	3	183
19	55	77	26	103	103	3	..	19	22	8	30	133
—19	+45	+54	+23	+77	+77	..	..	—19	—19	—8	—27	+50
VEL.												
In those for Stone.												
..	135	141	33	174	174	2	..	45	47	100	147	321
In those for Stone.												
..	135	141	33	174	174	2	..	45	47	100	147	321
In those for Stone.												
..	135	141	33	174	174	2	..	45	47	100	147	321
In those for Murum and Stone.												
..	+135	+141	+33	+174	+174	+2	..	+45	+47	+100	+147	+321

APPEN

STATISTICS OF MINES

Table

Number of workers and output of minerals during the

Province.	District and Mineral Field.	Total output. Tons.	AVERAGE NUMBER OF						
			UNDERGROUND.					OPEN	
			Males.						
			Foremen and Mates.	Miners.	Other skilled labour.	Other unskilled labour.	Total Males.	Foremen and Mates.	Miners.
		Tons.							MUR
Bombay	Bombay Suburban.	5,280						Figures included	
	Kaira . .	1,462						Figures included	
	Thana . .	9,156						Figures included	
	Total .	15,898						Figures included	
	Grand Total (Murum) for 1939.	15,898						Figures included	
	Grand Total of preceding year.	43,763	..	..	..	..	..	6	..
	Difference .	—27,865	..	..	..	..	..	—6	..
		Tons.							FIRE
Bengal .	Birbhum . .	2,500	..	..	..	..	..	1	50
	Burdwan . .	9,436	..	..	..	..	..	1	63
	Total .	11,936	..	..	..	..	..	2	113
Bihar . .	Manbhum . .	6,990	..	..	..	..	..	4	86
Central Provinces.	Jubbulpore .	34,936	..	..	..	..	..	6	5
	Grand Total (Fireclay) for 1939.	53,862	..	..	..	..	..	12	204
	Grand Total of preceding year.	46,407	1	80	12	82	75	12	204
	Difference .	+7,455	—1	—80	—12	—82	—75	..	..

DIX I—*contd.*

AND MINERALS—*contd.*

No. 1—*contd.*

year 1939 at mines under the Indian Mines Act—*contd.*

PERSONS EMPLOYED DAILY IN AND ABOUT THE MINES.												
WORKINGS.						SURFACE.						
Males.						Males.						
Other skilled labour.	Other unskilled labour.	Total Males.	Females.	Total Males and Females.	Total Underground and open workings.	Clerical and supervising staff.	Skilled labour.	Unskilled labour.	Total Males.	Females.	Total Males and Females.	GRAND TOTAL.
RUM												
In those for Stone.												
In those for Gravel.												
In those for Stone.												
In those for Gravel and Stone.												
In those for Gravel and Stone.												
..	81	87	19	106	106	2	..	27	29	58	87	193
..	—81	—87	—19	—106	—106	—2	..	—27	—29	—58	—87	—193
CLAY												
..	..	51	20	71	71	1	20	..	21	..	21	92
16	1	81	..	81	81	7	8	18	33	24	57	138
16	1	132	20	152	152	8	28	18	54	24	78	230
7	5	102	35	137	137	3	3	9	15	6	21	158
..	248	259	191	450	450	3	..	34	37	..	37	487
28	254	493	246	739	739	14	31	61	106	30	136	875
49	177	442	275	717	792	23	8	69	95	53	148	940
—26	+77	+51	—29	+22	—53	—0	+28	—9	+11	—23	—12	—65

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STATISTICS OF MINES

Table

Number of workers and output of minerals during the

Province.	District and Mineral Field.	Total output. Tons.	AVERAGE NUMBER OF						
			UNDERGROUND.					OPEN	
			Males.						
			Foremen and Mates.	Miners.	Other skilled labour.	Other unskilled labour.	Total Males.	Foremen and Mates.	Miners.
		Tons.							CHINA
Bihar	Bhagalpur	1,168	1	23	..	27	51	4	26
	Singhbhum	10,203	..	..	..	..	..	28	178
	Total	11,871	1	23	..	27	51	32	204
Central Provinces.	Jubbulpore	356	..	..	..	..	..	..	15
Delhi	Delhi	2,299	3	11	28	..	42	..	8
Punjab	Jhelum	..	1	3	..	..	4	..	..
	Grand Total (China clay) for 1939.	14,026	5	37	28	27	97	32	227
	Grand Total of preceding year.	11,007	4	78	7	27	116	24	168
	Difference	+3,019	+1	—41	+21	..	—19	+8	+64
		Tons.							CL
Bengal	Burdwan	11,636	..	..	..	..	..	2	67
Punjab	Attock	65,719					Figures	included	in those
	Grand Total (Clay) for 1939.	77,355	..	..	..	..	..	2	67
	Grand Total of preceding year.	61,565	..	..	..	..	..	2	50
	Difference	+15,790	..	..	..	..	..	..	+17

DIX *I—contd.*

AND MINERALS—*contd.*

No. 1—*contd.*

year 1939 at mines under the Indian Mines Act—*contd.*

PERSONS EMPLOYED DAILY IN AND ABOUT THE MINES.												
WORKINGS.						SURFACE.						
Males.						Males.						
Other skilled labour.	Other unskilled labour.	Total Males.	Females.	Total Males and Females.	Total Underground and open workings.	Clerical and supervising staff.	Skilled labour.	Unskilled labour.	Total Males.	Females.	Total Males and Females.	GRAND TOTAL.
CLAY.												
..	35	65	30	95	146	1	..	..	1	17	18	164
4	176	386	628	1,014	1,014	40	57	189	286	304	590	1,604
4	211	451	658	1,109	1,160	41	57	189	287	321	608	1,768
..	..	..	16	31	31	1	..	..	..	..	1	32
8	..	16	..	16	58	..	..	..	..	..	..	58
..	..	..	..	..	4	..	..	..	..	..	..	4
12	211	467	674	1,156	1,253	41	57	189	287	321	609	1,862
2	182	371	422	793	909	32	30	149	211	202	413	1,322
+10	+29	+96	+252	+363	+344	+9	+27	+40	+76	+119	+196	+540
AY.												
22	6	97	23	120	120	..	4	..	4	..	4	124
for Lime stone.												
22	6	97	23	120	120	..	4	..	4	..	4	124
20	9	81	21	102	102	..	3	..	3	..	3	105
+2	—3	+16	+2	+18	+18	..	+1	..	+1	..	+1	+19

APPEN

STATISTICS OF MINES

Table

Number of workers and output of minerals during the

Province.	District and Mineral Field.	Total output. Tons.	AVERAGE NUMBER OF — UNDERGROUND. Males. Foremen and Mates.	Miners.	Other skilled labour.	Other unskilled labour.	Total Males.	OPEN Foremen and Mates.	Miners.
		Tons.							BARY
Madras	Cuddapah	5,500	..	..	..	..	..	..	24
	Kurnool	716	..	..	8	2	10	..	..
	Grand Total (Barytes) for 1939.	6,216	..	..	8	2	10	..	24
	Grand Total of preceding year.	3,280	1	8	..	2	11	1	15
	Difference	+2,936	—1	—8	+8	..	—1	—1	+9
		Tons.							APA
Madras	Trichinopoly	182				Figures included in those			
	Total of preceding year.	23				Figures included in those			
	Difference	+159	Figures included in those for Gypsum.					..	..
		Cwt.							ASBES
Madras	Cuddapah	679	14	187	93	..	244	..	..
Rajputana	Ajmer-Merwara	8	..	..	..	..	..	1	..
	Grand Total (Asbestos) for 1939.	687	14	187	93	..	244	1	..
	Grand Total of preceding year.	54	..	..	..	..	..	1	..
	Difference	+633	+14	+187	+93	..	+244	..	..

DIX I—*contd.*

AND MINERALS—*contd.*

No. 1—*contd.*

year 1939 at mines under the Indian Mines Act—*contd.*

PERSONS EMPLOYED DAILY IN AND ABOUT THE MINES.												
WORKINGS.						SURFACE.						
Males.						Males.						
Other skilled labour.	Other unskilled labour.	Total Males.	Females.	Total Males and Females.	Total Underground and open workings.	Clerical and supervising staff.	Skilled labour.	Unskilled labour.	Total Males.	Females.	Total Males and Females.	GRAND TOTAL.
TES												
19	..	43	31	74	74	3	..	..	..	..	3	77
..	..	..	..	..	10	..	1	4	5	10	16	26
19	..	43	31	74	84	3	1	4	5	10	19	103
12	13	41	26	67	78	1	..	2	3	11	14	92
+7	—13	+2	+5	+7	+6	+2	+1	+2	+2	—1	+5	+11
TITE. for Gypsum.												
for Gypsum.												
..	..	..	..	..	..	..	..	..	..	..	..	..
TOS												
..	..	..	..	..	244	..	..	..	..	12	12	256
..	1	2	..	2	2	..	..	..	..	..	..	2
..	1	2	..	2	246	..	..	..	..	12	12	258
..	3	4	..	4	4	..	..	..	..	..	..	4
..	—2	—2	..	—2	+242	..	..	..	..	+12	+12	+254

APPEN

STATISTICS OF MINES

Table

Number of workers and output of minerals during the

Province.	District and Mineral Field.	Total output. Tons.	AVERAGE NUMBER OF						
			UNDERGROUND.						OPEN
			Males.						
			Foremen and Mates.	Miners.	Other skilled labour.	Other unskilled labour.	Total Males.	Foremen and Mates.	Miners.
		Tons.							OCH
Central Provinces.	Chanda . .	229	1	4	..	..	5	..	..
	Jubbulpore .	29					Figures	included	in those
	Grand Total (Ochre) for 1939.	258	1	4	..	..	5	..	..
	Grand Total of preceding year.	246	1	4	..	..	5	..	..
	Difference .	+12	..	..	..	..	..	..	..
									KYA
Bihar . .	Singhbhum .	766	..	..	..	..	..	..	15
Madras .	Nellore . .	7	..	..	..	..	..	..	3
	Grand Total (Kyanite) for 1939.	773	..	..	..	..	..	..	18
	Grand Total of preceding year.	832	..	..	..	..	..	4	76
	Difference .	—59	..	..	..	..	..	—4	—58
									GYP
Madras . .	Trichinopoly .	10,188	..	..	..	..	..	..	..
Punjab . .	Jhelum . .	7,842						Figures included	
	Grand Total (Gypsum) for 1939.	18,030	..	..	..	..	..	..	..
	Grand Total of preceding year.	23,242	..	..	..	..	..	..	..
	Difference .	—5,212	..	..	..	..	..	..	..

DIX I—*contd.*

AND MINERALS—*contd.*

No. 1—*contd.*

year 1939 at mines under the Indian Mines Act—*contd.*

PERSONS EMPLOYED DAILY IN AND ABOUT THE MINES.

WORKINGS.						SURFACE.						
Males.						Males.						
Other skilled labour.	Other unskilled labour.	Total Males.	Females.	Total Males and Females.	Total Underground and open workings.	Clerical and supervising staff.	Skilled labour.	Unskilled labour.	Total Males.	Females.	Total Males and Females.	GRAND TOTAL.
RE.												
..	..	..	..	..	5	..	..	4	4	4	8	13
for China clay.												
..	..	..	..	..	5	..	..	4	4	4	8	13
..	..	..	..	..	5	..	..	4	4	4	8	13
..	..	..	..	..	..	..	..	..	..	..	..	..
NITE.												
..	..	..	5	20	20	..	..	..	..	..	..	20
..	..	3	..	3	3	..	..	..	..	..	..	3
..	..	3	5	23	23	..	..	..	..	..	..	23
..	..	80	79	159	159	2	..	..	2	..	2	161
..	..	—77	—74	—136	—136	—2	..	..	—2	..	—2	—138
SUM.												
..	153	153	314	467	467	12	..	105	117	..	117	484
In those for Salt.												
..	153	153	314	467	467	12	..	105	117	..	117	484
..	101	101	86	187	187	10	..	60	70	38	108	295
..	+52	+52	+228	+280	+280	+2	..	+45	+47	—38	—9	+189

APPEN

STATISTICS OF MINES

Table

Number of workers and output of minerals during the

Province.	District and Mineral Field.	Total output. Tons.	AVERAGE NUMBER OF						
			UNDERGROUND.						
			Males.						
			Foremen and Mates.	Miners.	Other skilled labour.	Other unskilled labour.	Total Males.	Foremen and Mates.	Miners.
		Tons.							BAU
Bombay . .	Kaira . .	..	..	..	..	..	..	..	..
Central Provinces.	Jubbulpore .	5,527	..	..	..	..	..	1	5
	Grand Total (Bauxite) for 1939.	5,527	..	..	..	..	..	1	5
	Grand Total of preceding year.	10,134	..	..	..	..	..	3	17
	Difference .	—4,607	..	..	..	..	..	—2	—12
		Tons.							BER
Rajputana .	Ajmer-Merwara .	9	..	..	..	..	..	1	16
	Total of preceding year.	17	..	..	..	..	..	2	23
	Difference .	—8	..	..	..	..	..	—1	—7
		Tons.							FELS
Rajputana .	Ajmer-Merwara .	203	..	..	..	..	..	3	9
	Total of preceding year.	605	..	..	..	..	..	2	10
	Difference .	—312	..	..	..	..	..	+1	—1

DIX I—*contd.*

AND MINERALS—*contd.*

No. 1—*contd.*

year 1939 at mines under the Indian Mines Act—*contd.*

PERSONS EMPLOYED DAILY IN AND ABOUT THE MINES.												
OPEN WORKINGS.						SURFACE.						
Males.						Males.						
Other skilled labour.	Other unskilled labour.	Total Males.	Females.	Total Males and Females.	Total Underground and open workings.	Clerical and supervising staff.	Skilled labour.	Unskilled labour.	Total Males.	Females.	Total Males and Females.	GRAND TOTAL.
XITE.												
..	..	..	..	..	..	1	..	21	22	4	26	26
..	16	22	31	53	53	1	..	2	3	3	6	59
..	16	22	31	53	53	2	..	23	25	7	32	85
..	22	42	55	97	97	1	..	10	11	1	12	109
..	—6	—20	—24	—44	—44	+1	..	+13	+14	+6	+20	—24
YL.												
..	..	17	..	17	17	1	..	..	..	..	1	18
..	..	..	..	25	25	2	..	..	2	..	2	27
..	..	+17	..	—8	—8	—1	..	..	—2	..	—1	—9
PAR.												
..	11	23	..	23	23	..	..	..	..	..	..	23
..	5	17	..	17	17	1	..	..	1	..	1	18
..	+6	+6	..	+6	+6	—1	..	..	—1	..	—1	+5

APPEN

STATISTICS OF MINES

Table

Number of workers and output of minerals during the

Province.	District and Mineral Field.	Total output. Tons.	AVERAGE NUMBER OF						
			UNDERGROUND.					OPEN	
			Males.						
			Foremen and Mates.	Miners.	Other skilled labour.	Other unskilled labour.	Total Males.	Foremen and Mates.	Miners.
		Tons.							FULLERS
Central Provinces.	Jubbulpore .	42						Figures included in	
	Total of preceding year.	58						Figures included in	
	Difference .	—16						Figures included in	
		Tons.							GRA
Central Provinces.	Betul . .	63	..	..	..	..	..	..	2
	Total of preceding year.	20	..	..	..	..	..	1	2
	Difference .	+40	..	..	..	..	..	—1	..
		Cwts.							CORUN
Madras . .	Salem . .	15	..	..	..	1	1	..	..
	Total of preceding year.	10	..	..	..	..	..	..	2
	Difference .	+5	..	..	..	+1	+1	..	—2

DIX I—*contd.*

AND MINERALS—*contd.*

No. 1—*contd.*

year 1939 at mines under the Indian Mines Act—*contd.*

PERSONS EMPLOYED DAILY IN AND ABOUT THE MINES.

OPEN WORKINGS.						SURFACE.						
Males.						Males.						
Other skilled labour.	Other unskilled labour.	Total Males.	Females.	Total Males and Females.	Total Underground and open workings.	Clerical and supervising staff.	Skilled labour.	Unskilled labour.	Total Males.	Females.	Total Males and Females.	GRAND TOTAL.
EARTH.												
those for limestone.												
those for Limestone.												
those for Limestone.								..				
PHITE.												
2	4	8	..	8	8	..	1	2	3	..	3	11
..	4	7	..	7	7	..	..	..	..	..	..	7
+2	..	+1	..	+1	+1	..	+1	+2	+3	..	+3	+4
DUM.												
..	..	..	..	..	1	..	..	..	..	4	4	5
2	..	2	12	14	14	..	..	..	..	..	..	14
—2	..	—2	—12	—14	—13	..	..	..	..	+4	+4	—9

APPEN

STATISTICS OF MINES

Table

Number of workers and output of minerals during the

PROVINCE.	District and Mineral Field.	Total output.	AVERAGE NUMBER OF						
			UNDERGROUND. Males.						
			Foremen and Mates.	Miners.	Other skilled labour.	Other unskilled labour.	Total Males.	Foremen and Mates.	Miners.
		Cwts.							GAR
Madras . .	Nellore . .	124	..	..	..	..	..	..	..
	Grand Total (Metalliferous Mines) for 1939.	..	1,036	10,158	3,531	7,378	22,103	1,820	22,194
	Grand Total of preceding year.	..	1,006	10,534	2,490	6,425	20,455	1,894	23,749
	Difference .	..	+30	—376	+1,041	+953	+1,648	—74	—1,555
	Grand Total (All Minerals) for 1939.	..	..	..	..	..	146,827	..	..
	Grand Total of preceding year.	..	..	..	..	..	140,651	..	..
	Difference .	..	..	..	..	..	+6,176	..	..

DIX I—*contd.*

AND MINERALS—*concld.*

No. 1—*concld.*

year 1939 at mines under the Indian Mines Act—*concld.*

PERSONS EMPLOYED DAILY IN AND ABOUT THE MINES.												
OPEN WORKINGS.					Total Underground and open workings.	SURFACE.						GRAND TOTAL.
Males.			Females.	Total Males and Females.		Males.				Females.	Total Males and Females.	
Other skilled labour.	Other unskilled labour.	Total Males.				Clerical and supervising staff.	Skilled labour.	Unskilled labour.	Total Males.			
NET.												
..	4	4	1	5	5	..	..	..	..	..	..	5
3,532	12,572	40,118	21,719	61,837	83,940	2,418	4,305	6,969	13,692	5,723	19,415	103,355
4,144	11,452	41,239	23,271	64,510	84,965	2,236	4,007	7,456	13,699	6,503	20,202	105,167
—612	+1,120	—1,121	—1,552	—2,673	—1,025	+182	+298	—487	—7	—780	—787	—1,812
..	..	50,306	26,353	76,659	223,486	..	..	..	57,765	24,093	81,858	305,344
..	..	54,121	29,212	83,333	223,984	..	..	..	58,199	24,077	82,276	306,260
..	..	—3,815	—2,859	—6,674	—498	..	..	..	—434	+16	—418	—916

APPEN

Table

Statement of total mining population in Coal Mines in British India

Name of Province.	Name of coalfield or District.	TOTAL NUMBER ATTENDING WORK.							
		Males.				Females.			
		Underground.	Open workings.	Surface.	Total.	Open workings.	Surface.	Total.	Total Males and Females.
Assam	Khasi and Jaintia	46	..	59	123	..	45	45	168
	Makum	1,626	80	421	2,127	32	103	135	2,262
	Nazira	243	..	139	382	..	..	..	382
	Total	1,933	80	619	2,632	32	148	180	2,812
Baluchistan	Sor Range	102	1	1	104	..	..	..	104
	Khost	95	..	12	107	..	..	..	107
	Total	197	1	13	211	..	..	..	211
Bengal	Raniganj	49,683	250	12,317	62,250	175	6,792	6,967	69,217
Bihar	Raniganj	7,291	257	1,779	9,327	172	1,275	1,447	10,774
	Jharia	67,753	1,501	20,791	90,045	1,386	10,456	11,842	101,887
	Bokaro	3,534	5,165	1,963	10,662	2,725	570	3,295	13,957
	Giridih	4,769	2	858	5,629	2	393	395	6,024
	Karanpura	1,435	1,149	942	3,526	449	249	698	4,224
	Jainty	724	..	243	967	..	65	65	1,032
	Daltonganj	103	..	72	175	..	16	16	191
	Total	85,609	8,074	26,648	120,331	4,734	13,024	17,758	138,089
Central Provinces	Vardha Valley	2,421	..	577	2,998	..	188	188	3,186
	Pench Valley	8,896	454	2,458	11,808	553	1,116	1,669	13,477
	Yeotmal	412	..	69	481	..	17	17	498
	Total	11,729	454	3,104	15,287	553	1,321	1,874	17,161
Orissa	Hingir Rampur	467	..	102	569	..	222	222	791
Punjab	Salt Range	2,431	55	1,175	3,661	..	41	41	3,702
	Grand Total	152,049	8,914	43,978	204,941	5,494	21,548	27,042	231,983

DIX I—*contd.*

No. 1-A.

on a day in the selected week in February 1940.

TOTAL NUMBER PREVENTED FROM ATTENDING.								
MALES.				FEMALES.				
Under-ground.	Open working.	Surface.	Total.	Open working.	Surface.	Total.	Total Males and Females.	GRAND TOTAL.
7	..	9	16	..	8	8	24	192
1,058	23	108	1,189	13	37	50	1,239	3,501
65	..	51	116	..	..	..	116	498
1,130	23	168	1,321	13	45	58	1,379	4,191
..	..	..	..	..	..	..	..	104
..	..	..	..	..	..	..	..	107
..	..	..	..	..	..	..	..	211
3,922	3	644	4,569	4	737	741	5,310	74,527
310	6	106	422	5	92	97	519	11,293
2,059	81	560	2,700	55	354	409	3,109	104,996
264	431	306	1,001	332	43	375	1,376	15,333
3,524	..	142	3,666	..	127	127	3,793	9,817
164	237	67	468	87	2	89	557	4,781
10	..	..	10	..	..	..	10	1,042
..	..	..	..	..	..	..	..	191
6,331	755	1,181	8,267	479	618	1,097	9,364	147,453
47	..	19	66	..	1	1	67	3,253
841	19	98	958	23	40	63	1,021	14,498
25	..	..	25	..	..	..	25	523
918	19	117	1,049	23	41	64	1,113	18,274
3	..	..	3	..	..	..	3	794
163	..	67	230	..	1	1	231	3,933
12,462	800	2,177	15,439	519	1,442	1,961	17,400	249,383

APPEN

Table

Average hours worked per week in each

Mineral Field.	Overmen and Sirdars. Foremen and Mates.	Underground.			
		Miners.	Loaders.	Skilled Labour.	Unskilled Labour.
Jharia Coalfield (Bihar)	49	46	46	47	47
Raniganj Coalfield (Bengal)	51	46	46	48	47
Giridih Coalfield (Bihar)	46	43	43	46	46
Assam Coalfields	51	49	51	52	51
Punjab „	46	43	41	44	44
Baluchistan Coalfield	37	38	37	40	42
Pench Valley Coal (Central Provinces)	51	48	49	50	50
Bihar Mica	45	47	..	47	47
Madras Mica	47	46	..	47	47
Central Provinces Manganese	49	48	..	49	45
Central Provinces Limestone	..	..	..	..	..
Bihar Iron	..	.	..	..	..
Punjab Salt	44	46	..	52	52
Bihar China clay	38	34	..	..	28
Punjab Slate	..	..	..	..	..

DIX I—*contd.*

No. 2.

important mining field during the year 1939.

Open workings.						Surface.			
Overmen and Sirdars.	Miners.	Loaders.	Skilled Labour.	Un-skilled Labour.	Females.	Clerical and supervising staff.	Skilled Labour.	Un-skilled Labour.	Females.
48	46	46	48	48	46	51	50	49	49
49	48	46	47	47	48	52	50	49	49
54	54	..	48	..	51	49	48	48	47
53	54	53	53	53	53	51	51	51	51
48	48	..	52	52	..	47	46	48	48
..	..	..	..	..	..	48	45	40	..
52	51	49	51	50	51	52	50	50	50
44	45	..	46	46	46	52	48	49	49
42	46	..	46	46	47	47	47	47	47
48	46	..	47	44	45	49	46	43	44
49	48	..	48	48	47	49	48	48	48
48	48	..	48	48	48	48	48	48	48
54	..	..	..	54	..	52	45	49	..
44	41	..	45	42	42	44	45	45	42
43	42	..	43	43	..	48	48	48	..

APPEN

Table

Analysis of figures relating to

Province.	Coalfield.	Coal.					
		Opening stock	Raisings.	Total.	Despatches.	Colliery consumption.	Coal delivered for coking.
		Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
Assam	Khasi and Jaintia Hills.	1,637	10,126	11,763	11,643	..	..
	Makum . .	..	238,102	238,102	225,533	10,880	1,689
	Nazira . .	166	26,300	26,466	25,675	448	..
Baluchistan .	Baluchistan .	946	16,213	17,159	15,904	799	..
Bengal and part of Bihar.	Raniganj . .	454,760	8,542,506	8,997,266	7,853,530	518,892	47,395
Bihar	Jharia . .	1,526,461	10,529,159	12,055,620	8,230,397	772,870	1,364,443
	Bokaro . .	11,101	1,983,564	1,994,665	1,928,331	46,881	12,327
	Karanpura .	41,419	566,885	608,304	542,852	21,774	..
	Giridih . .	10,598	695,879	706,477	675,829	29,198	..
	Jainty . .	6,114	41,358	47,472	35,956	7,216	..
	Daltonganj .	168	17,090	17,258	2,262	1,854	..
Central Provinces.	Betul . .	187	3,794	3,981	1,326	2,095	..
	Pench Valley .	25,804	1,415,562	1,441,366	1,340,993	75,558	..
	Wardha Valley	3,619	291,639	295,258	271,363	16,575	..
	Yeotmal .	2	31,836	31,838	25,730	5,976	..
N.-W. F. Provinces.	Hazara . .	..	8	8	5	..	..
Orissa .	Hingir Rampur	2,720	58,687	61,407	54,907	3,779	..
Punjab .	Salt Range .	6,635	194,080	200,715	189,754	4,605	..
	Total 1939 .	2,092,337	24,662,788	26,755,125	21,431,990	1,519,400	1,425,854

DIX I—*contd.*

No. 3.

the output of coal and coke, 1939.

		Coke.									
Coal despatched to coke factories.	Closing stocks.	Opening stock.		Coke made.		Despatches.		Colliery consumption.		Closing stocks.	
		Hard.	Soft.	Hard.	Soft.	Hard.	Soft.	Hard.	Soft.	Hard.	Soft.
Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
..	120	..	..	..	..	..	..	..	..	..	..
..	..	..	..	355	..	331	..	24	..	..	..
..	343	..	..	..	..	..	..	..	..	..	..
..	456	..	..	..	..	..	..	..	..	..	..
..	577,449	205	379	880	31,190	981	29,773	85	436	19	1,360
1,504,656	1,687,010	8,552	20,177	105,844	861,445	98,655	855,915	793	6,112	14,948	19,595
233	7,126	700	1	3,663	3,323	4,235	3,294	17	30	111	..
..	43,678	..	..	..	..	..	..	..	..	..	..
45,087	1,450	..	..	..	..	..	..	..	..	..	..
..	4,300	..	..	..	..	..	..	..	..	..	..
..	13,142	..	..	..	..	..	..	..	..	..	..
..	560	..	..	..	..	..	..	..	..	..	..
..	24,815	..	..	..	..	..	..	..	..	..	..
..	7,320	..	..	..	..	..	..	..	..	..	..
..	132	..	..	..	..	..	..	..	..	..	..
..	3	..	..	..	..	..	..	..	..	..	..
..	2,721	..	..	..	..	..	..	..	..	..	..
..	6,356	..	..	..	..	..	..	..	..	..	..
1,630,976	2,377,881	9,457	20,557	110,742	895,958	104,202	888,982	919	6,578	15,078	20,955

APPENDIX I—*contd.*

Table No. 4.

Numbers of mines opened, closed and inspected, during the year 1939.

Province.	District and Mineral field.	Number of mines under the scope of the Act.	Number of mines.				Inspections.	
			Worked under mechanical power.	Not worked by mechanical power.	Opened during the year.	Closed during the year.	Number of mines inspected.	Number of inspections.
	COAL.							
Assam	Khasi and Jaintia Hills	1	..	1	..	..	1	1
	Lakhimpur—Makum Coalfield	5	5	..	..	..	4	16
	Naga Hills—Nazira Coalfield	1	..	1	..	..	1	4
Baluchistan	Baluchistan Coalfield	18	..	18	7	4	12	12
Bengal (and part of Bihar).	Raniganj Coalfield	231	157	74	28	29	248	958
Bihar	Jharia Coalfield	249	172	77	13	25	260	1,182
	Bokaro Coalfield	10	5	5	1	1	5	6
	Karanpura Coalfield	5	5	..	..	..	5	6
	Giridih Coalfield	6	3	3	..	..	6	27
	Jainty Coalfield	6	1	5	..	1	5	10
	Daltonganj Coalfield	1	1	..	..	..	1	1
Central Provinces	Betul	1	1	...	..	..	1	1
	Pench Valley Coalfield	26	20	6	4	1	22	48
	Wardha Valley	6	6	..	..	..	6	11
	Yeotmal	1	1	..	..	..	1	2
N. W. F. Province	Hazara	1	..	1	1	..	..	..
Orissa	Hingir Rampur Coalfield	2	2	..	1	..	1	1
Punjab	Attock	2	..	2	2	2	..	..
	Rawalpindi	1	..	1	1	..	..	..
	Salt Range Coalfield	46	1	45	19	14	25	35

APPENDIX I—*contd.*

Table No. 4—*contd.*

Numbers of mines opened, closed and inspected, during the year 1939.—contd.

Province.	District and Mineral field.	Number of mine under the scope of the Act.	Number of mines.				Inspections.	
			Worked under mechanical power.	Not worked by mechanical power.	Opened during the year.	Closed during the year.	Number of mines inspected.	Number of inspections.
	COAL—*contd.*							
Sind . . .	Dadu	..	..	..	..	..	1	1
	Grand Total (Coal) for 1939 .	610	380	239	72	77	605	2,322
	Grand Total of preceding year	665	388	277	115	112	618	2,546
	Difference .	—46	—8	—38	—43	—35	—13	—224
	IRON ORE.							
Bihar . . .	....	9	..	9	1	2	8	11
	Total of preceding year .	8	..	8	2	1	2	3
	Difference .	+1	..	+1	—1	+1	+6	+8
	MANGANESE ORE.							
Bihar . . .	Singhbhum . . .	15	..	15	2	..	6	6
Bombay .	North Kanara . . .	3	..	3	..	1	..	..
	Panch Mahals . . .	2	2	..	..	..	1	1
Central Provinces .	....	85	2	88	29	14	53	53
Madras . .	....	8	1	7	2	1	14	14
	Grand Total (Manganese Ore) for 1939.	113	5	108	33	16	74	74
	Grand Total of preceding year	126	6	120	30	42	55	57
	Difference .	—13	—1	—12	+3	—26	+19	+17

APPENDIX I.—*contd.*

Table No. 4—*contd.*

Numbers of mines opened, closed and inspected, during the year 1939—contd.

Province.	District and Mineral field.	Number of mines under the scope of the Act.	Number of mines				Inspections.	
			Worked under mechanical power.	Not worked by mechanical power.	Opened during the year.	Closed during the year.	Number of mines inspected.	Number of inspections.
	GOLD.							
Bihar . . .	....	3	..	3	1	1	..	..
	Total of preceding year .	3	..	3	1	1	..	..
	Difference .	..	..	..	..	..	..	..
	CHROMITE ORE.							
Baluchistan . .	....	39	..	39	..	..	2	3
Bihar . . .	....	12	..	12	..	1	14	14
	Grand Total (Chromite Ore) for 1939.	51	..	51	..	1	16	17
	Grand Total of preceding year	52	..	52	1	..	11	11
	Difference .	—1	..	—1	—1	+1	+5	+6
	COPPER ORE.							
Bihar . .	Manbhum	..	..	..	..	..	1	1
	Singhbhum . . .	5	4	1	1	..	4	9
Central Provinces .	Jubbulpur	1	..	1	1	1	..	..
	Grand Total (Copper Ore) for 1939.	6	4	2	2	1	5	10
	Grand Total of preceding year	5	5	..	..	1	3	5
	Difference .	+1	—1	+2	+2	..	+2	+5
	MICA.							
Bengal. . .	....	2	..	2	2	..	..	..
Bihar . . .	....	645	46	599	207	235	176	180

APPENDIX I—*contd.*

Table No. 4—*contd.*

Numbers of mines opened, closed and inspected, during the year 1939—*contd.*

Province.	District and Mineral field.	Number of mines under the scope of the Act.	Number of mines: Worked under mechanical power.	Number of mines: Not worked by mechanical power.	Number of mines: Opened during the year.	Number of mines: Closed during the year.	Inspections: Number of mines inspected.	Inspections: Number of inspections.
	MICA—*contd.*							
Madras . .	....	124	18	106	48	35	74	74
Rajputana . .	....	41	..	41	30	23	14	16
	Grand Total (Mica) for 1939	812	64	748	287	295	264	270
	Grand Total of preceding year	839	40	799	300	254	160	165
	Difference .	—27	+24	—51	—13	+41	+104	+105
	SALT.							
Punjab . .	....	3	1	2	..	..	4	6
	Total of preceding year .	3	1	2	..	..	3	6
	Difference .	..	..	..	..	..	+1	..
	MAGNESITE.							
Madras . .	Salem	3	..	3	..	1	1	1
	Total of preceding year .	3	..	3	1	..	2	2
	Difference .	..	..	..	—1	+1	—1	—1
	STEATITE.							
Bihar . . .	....	3	..	3	1	..	2	2
Central Provinces .	....	5	..	5	3	..	..	..
Madras . .	....	1	..	1	1	..	1	1

APPENDIX I—*contd.*

Table No. 4—*contd.*

Numbers of mines opened, closed and inspected, during the year 1939—*contd.*

Province.	District and Mineral field.	Number of mines under the scope of the Act.	Number of mines: Worked under mechanical power.	Number of mines: Not worked by mechanical power.	Number of mines: Opened during the year.	Number of mines: Closed during the year.	Inspections: Number of mines inspected.	Inspections: Number of inspections.
	STEATITE—*contd.*							
United Provinces .	....	14	..	14	14	14	12	12
	Grand Total (Steatite) for 1939.	23	..	23	19	14	15	15
	Grand Total of preceding year	19	..	19	7	15	17	18
	Difference .	+4	..	+4	+12	—1	—2	—3
	SLATE.							
Bihar . . .	Monghyr	2	..	2	..	..	1	1
Punjab . .	....	12	..	12	3	1	11	11
	Grand Total (Slate) for 1939	14	..	14	3	1	12	12
	Grand Total of preceding year	14	..	14	1	5	14	14
	Difference .	..	..	..	+2	—4	—2	—2
	LIMESTONE.							
Bihar . . .	....	14	..	14	..	1	16	16
Central Provinces .	....	12	1	11	1	2	2	2
Madras . .	....	1	..	1	..	..	7	7
Punjab . .	....	3	..	3	..	..	5	6
	Grand Total (Limestone) for 1939.	30	1	29	1	3	30	31
	Grand Total of preceding year	37	2	35	2	5	25	26
	Difference .	—7	—1	—6	—1	—2	+5	+5

APPENDIX 1—*contd.*

Table No. 4—*contd.*

Numbers of mines opened, closed and inspected, during the year 1939—*contd.*

Province.	District and Mineral field.	Number of mines under the scope of the Act.	Number of mines				Inspections.	
			Worked under mechanical power.	Not worked by mechanical power.	Opened during the year.	Closed during the year.	Number of mines inspected.	Number of inspections.
	STONE.							
Bengal . .	....	3	..	3	..	..	3	3
Bihar . . .	....	58	..	58	7	5	74	74
Bombay . .	....	19	3	16	1	2	1	1
Central Provinces .	....	3	..	3	..	..	..	..
Delhi . . .	....	5	..	5	1	..	13	13
Madras . .	....	12	1	11	2	1	14	14
Punjab . .	....	4	..	4	..	..	4	4
Sind . . .	....	1	..	1	..	..	6	6
United Provinces .	....	13	..	13	2	..	29	30
	Grand Total (Stone) for 1939	118	4	114	13	8	144	145
	Grand Total of preceding year	123	2	121	18	11	74	77
	Difference .	—5	+2	—7	—5	—3	+70	+68
	SAND STONE.							
Bihar . . .	Shahabad	2	..	2	..	..	3	3
United Provinces .	Banda	..	..	..	..	..	2	2
	Grand Total (Sandstone) for 1939.	2	..	2	..	..	5	5
	Grand Total of preceding year	2	..	2	..	..	..	..
	Difference .	..	..	..	..	..	+5	+5

APPENDIX I—*contd.*

Table No. 4—*contd.*

Numbers of mines opened, closed and inspected, during the year 1939.—*contd.*

PROVINCE.	District and Mineral field.	Number of mines under the scope of the Act.	NUMBER OF MINES.				INSPECTIONS.	
			Worked under mechanical power.	Not worked by mechanical power.	Opened during the year.	Closed during the year.	Number of mines inspected.	Number of inspections.
	FIRE CLAY.							
Bengal. . .	....	5	..	5	3	2	11	11
Bihar . . .	....	8	..	8	1	2	2	3
Central Provinces .	.....	3	1	2	..	..	..	..
Orissa . . .	....	..	..	..	..	..	1	1
	Grand Total (Fire clay) for 1939.	16	1	15	4	4	14	15
	Grand Total of preceding year.	17	1	16	5	5	10	11
	Difference .	—1	..	—1	—1	—1	+4	+4
	CHINA CLAY.							
Bihar . . .	....	9	..	9	2	..	5	5
Central Provinces .	....	1	..	1	..	..	..	..
Delhi . . .	....	4	..	4	3	2	3	3
Punjab . .	....	1	..	1	1	1	..	..
	Grand Total (China clay) for 1939.	15	..	15	6	3	8	8
	Grand Total of preceding year.	16	..	16	8	7	3	4
	Difference .	—1	..	—1	—2	—4	+5	+4

APPENDIX I—*contd.*

Table No. 4—*contd.*

Numbers of mines opened, closed and inspected, during the year 1939—*contd.*

Province.	District and Mineral field.	Number of mines under the scope of the Act.	Number of mines.				Inspections.	
			Worked under mechanical power.	Not worked by mechanical power.	Opened during the year.	Closed during the year.	Number of mines inspected.	Number of inspections.
	CLAY.							
Bengal	Burdwan	2	1	1	..	..	..	..
	Total of preceding year	2	1	1	..	..	3	3
	Difference	..	..	..	..	..	—3	—3
	BARYTES.							
Madras	..	3	..	3	..	..	4	4
	Total of preceding year	3	..	3	..	..	..	..
	Difference	..	..	..	..	..	+4	+4
	CORUNDUM.							
Madras	..	1	..	1	..	1	..	..
	Total of preceding year	1	..	1	1	..	..	..
	Difference	..	..	..	—1	+1	..	..
	ASBESTOS.							
Madras	..	1	..	1	..	..	1	1
Rajputana	..	1	..	1	1	1	..	..
	Grand Total (Asbestos) for 1939.	2	..	2	1	1	1	1
	Grand Total of preceding year.	1	..	1	..	..	..	..
	Difference	+1	..	+1	+1	+1	+1	+1

APPENDIX I—*contd.*

Table No. 4—*contd.*

Numbers of mines opened, closed and inspected, during the year 1939—*contd.*

Province.	District and Mineral field.	Number of mines under the scope of the Act.	Number of Mines.				Inspections.	
			Worked under mechanical power.	Not worked by mechanical power.	Opened during the year.	Closed during the year.	Number of mines inspected.	Number of inspections.
	OCHRE.							
Central Provinces .	.. . . . .	1	..	1	..	..	..	..
	Total of preceding year .	1	..	1	..	..	..	..
	Difference .	..	..	..	..	..	..	..
	GYPSUM.							
Madras . .	.. . . . .	5	..	5	3	..	..	..
	Total of preceding year .	2	..	2	..	..	..	..
	Difference .	+3	..	+3	+3	..	..	..
	BERYL.							
Rajputana . .	.. . . . .	1	..	1	..	..	..	..
	Total of preceding year .	2	..	2	..	1	..	..
	Difference .	—1	..	—1	..	—1	..	..
	GRAPHITE.							
Central Provinces .	.. . . . .	1	..	1	1	1	..	..
Madras . .	.. . . . .	1	..	1	..	..	..	..
	Grand Total (Graphite) for 1939.	2	..	2	1	1	..	..
	Grand Total of preceding year.	2	..	2	1	1	..	..
	Difference .	..	..	..	..	..	..	..

APPENDIX I—*contd.*

Table No. 4—*contd.*

Numbers of mines opened, closed and inspected, during the year 1939—*contd.*

Province.	District and Mineral field.	Number of mines under the scope of the Act.	Number of mines				Inspections.	
			Worked under mechanical power.	Not worked by mechanical power.	Opened during the year.	Closed during the year.	Number of mines inspected.	Number of inspections.
	BAUXITE.							
Bombay . .	.. . . . .	1	..	1	..	..	..	..
Central Provinces .	.. . . . .	2	..	2	..	..	..	..
	Grand Total (Bauxite) for 1939.	3	..	3	..	..	..	..
	Grand Total of preceding year.	3	..	3	..	..	..	..
	Difference .	..	..	..	..	..	..	..
	FELSPAR.							
Rajputana . .	.. . . . .	3	..	3	1	1	..	..
	Total of preceding year .	2	..	2	..	..	2	2
	Difference .	+1	..	+1	+1	+1	—2	—2
	KYANITE.							
Bihar . . .	.. . . . .	1	..	1	..	..	..	..
Madras . .	.. . . . .	1	..	1	1	1	..	..
	Grand Total (Kyanite) for 1939.	2	..	2	1	1	..	..
	Grand Total of preceding year.	1	..	1	..	..	..	..
	Difference .	+1	..	+1	+1	+1	..	..

APPENDIX I—*contd.*

Table No. 4—*concld.*

Numbers of mines opened, closed and inspected, during the year 1939—*concld.*

Province.	District and Mineral field.	Number of mines under the scope of the Act.	Number of mines				Inspections.	
			Worked under mechanical power.	Not worked by mechanical power.	Opened during the year.	Closed during the year.	Number of mines inspected.	Number of inspections.
	GARNET.							
Madras . .	. . . . .	1	..	1	..	1	..	..
	Total of preceding year .	..	..	..	..	..	..	..
	Difference .	+1	..	+1	..	+1	..	..
	GRAVEL.							
Bombay . .	.. ..	1	..	1	..	..	..	..
	Total of preceding year .	..	..	..	..	..	..	..
	Difference .	+1	..	+1	..	..	..	..
	Grand Total (Metalliferous Mines) for 1939.	1,245	81	1,164	377	354	605	625
	Grand Total of preceding year.	1,288	58	1,230	378	349	390	411
	Difference .	—43	+23	—66	—1	+5	+215	+214
	Grand Total (All Minerals) for 1939.	1,864	461	1,403	449	431	1,210	2,947
	Grand Total of preceding year.	1,953	446	1,507	493	461	1,008	2,957
	Difference .	—89	+15	—104	—44	30	+202	—10

APPENDIX I—*contd.*

Table No. 5.

The following table shows the fluctuation in the output of the principal minerals raised from mines classed under the Indian Mines Act. The other minerals raised are apatite, asbestos, barytes, bauxite, beryl, chinaclay, clay, corundum, felspar, fireclay, fuller's earth, garnet, graphite, gypsum, kyanite, magnesite, ochre, slate, stone and steatite :—

Year.	Coal.	Manganese ore.	Mica.	Limestone.	Salt.	Gold.	Copper ore.	Wolfram ore.	Iron ore.	Chromite ore.	Tin ore.	Lead ore.	Silver
	Tons.	Tons.	Cwts.	Tons.	Tons.	Troy ozs.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Troy ozs.
1930	22,683,861	623,678	52,519	1,143,312	147,276	30	123,749	1,509	1,132,893	30,488	3,001	530,119	7,054,206
1931	20,514,597	347,373	46,177	862,226	134,916	..	153,636	969	590,176	14,938	2,552	397,679	5,900,400
1932	18,719,587	88,119	32,643	725,378	150,286	50	175,375	848	673,434	7,866	2,957	372,586	5,998,956
1933	18,160,681	53,240	41,005	1,120,110	145,838	267	201,722	836	653,239	9,770	3,209	454,791	6,054,069
1934	20,243,977	221,282	55,555	940,860	154,955	858	328,676	1,333	834,477	9,356	3,890	443,489	5,792,033
1935	21,014,469	422,847	58,553	1,000,308	150,515	1,255	350,801	2,549	1,179,050	19,039	4,383	460,886	5,825,929
1936	20,583,982	624,830	82,077	1,007,957	151,523	1,376	357,194	3,140	1,401,530	28,142	4,664	468,842	5,952,000
1937	22,335,528	800,280	94,811	1,318,598	163,813	26	371,458	*	1,587,362	35,387	*	*	*
1938	25,276,743	766,341	101,633	1,582,058	164,674	16	288,076	*	1,421,090	27,086	*	*	*
1939	24,662,788	669,020	104,575	1,515,690	165,950	..	360,216	*	1,543,934	18,428	*	*	*

*The production in previous years was from Burma.

Table No. 6.

The following table shows the amount of coal raised, the average number of persons working daily and the death-rates during the years 1930-1939 in respect of coal mines under the Indian Mines Act :—

Year.	Amount of coal raised.	Average number of persons working daily below and above ground.	Number of deaths below and above ground.	Death-rates.	
				Per 1,000,000 tons raised.	Per 1,000 persons working daily below and above ground.
1930	22,683,861	169,001	211	·80	1·25
1931	20,514,597	158,267	185	9·02	1·17
1932	18,719,587	148,489	151	8·07	1·02
1933	18,160,681	144,707	124	6·83	0·86
1934	20,243,977	151,375	157	7·76	1·04
1935	21,014,469	159,254	264	12·56	1·66
1936	20,583,982	162,917	420	20·40	2·58
1937	22,335,528	171,149	200	8·95	1·17
1938	25,276,743	201,093	248	9·81	1·23
1939	24,662,788	201,089	249	11·76	1·23

APPENDIX I—*contd.*

Table No. 7.

Aggregate horse power and purpose for use of electric motors installed both on surface and underground at coal mines under the Indian Mines Act.

Coalfield.	Horse power on surface.						Horse power below ground.					Total horse power of motors installed.
	Winding.	Ventilation.	Haulage.	Coal washing or screening.	Miscellaneous.	Total.	Haulage.	Pumping.	Portable machinery.	Miscellaneous.	Total.	
Assam . .	..	117	125	7	263	512	180	..	..	...	180	692
Bokaro . .	200	195	520	85	1,421	2,421	340	766	100	35	1,241	3,662
Central Provinces and Berar.	..	135	100	25	207	467	380	1,202	332	90	2,013	2,480
Giridih . .	165	388	..	270	448	1,271	779	4,689	160	2	5,630	6,901
Jharia . .	3,088	1,385	2,349	1,310	2,350	10,482	9,672	26,551	3,223	1,832	41,278	51,760
Karanpura . .	..	75	785	95	352	1,307	95	419	100	..	614	1,921
Punjab . .	..	..	125	..	21	146	..	..	..	..	..	146
Raniganj . .	2,410	2,037	782	1,134	1,856	8,219	8,750	13,771	5,387	311	28,219	36,438
TOTAL .	5,863	4,332	4,786	2,926	6,918	24,825	20,205	47,398	9,302	2,270	79,175	104,000

Table No. 8.

Number of mines under the Indian Mines Act, where electric power is used and the aggregate horse power of electric motors installed.

Province.	Minerals worked.				Total horse power of motors installed.
	Coal.		Sundry Minerals.		
	Number of mines.	Horse power.	Number of mines.	Horse power.	
Assam	2	692	..	..	692
Bengal	55	31,013	1	58	31,071
Bihar	76	69,669	10	4,792	74,461
Bombay	..	..	1	206	206
Central Provinces and Berar . .	10	2,480	4	573	3,053
Madras	..	..	4	629	629
Punjab	1	146	2	1,849	1,995
Total .	144	104,000	22	8,107	112,107

APPENDIX I—*contd.*

Table No. 9.

Number and type of coal-cutting machines at work during 1939 in Coal Mines under the Indian Mines Act.

Type of machines.	Power.		Total number of machines.
	A. C.	D. C.	
Chain	147	12	159
Bar	33	1	34
Percussive	10	..	10
Total	190	13	203

Jharia Coalfield	56 machines	Total number of square feet undercut—10,816,032.
Raniganj coalfield	130 „	
Giridih Coalfield	1 „	
Karanpura Coalfield	2 „	
Bokaro Coalfield	2 „	
Central Provinces Coalfield	12 „	

Table No. 10.

Number of mechanical ventilators in use during 1939 at Coal Mines under the Indian Mines Act.

Assam.	Baluchistan.	Bengal.	Bihar.	Central Provinces.	Orissa.	Punjab.	Total.
9	..	47	70	11	..	2	139

APPENDIX I—*contd.*

Table No. 11.

Safety lamps in use during 1939 at Coal Mines under the Indian Mines Act.

Name of Manufacturer.	Number in use in							
	Assam.	Baluchistan.	Bengal.	Bihar.	Central Provinces.	Orissa.	Punjab.	Total.
			ELECTRIC.					
Ceag	385	..	968	2,521	..	..	..	3,874
Concordia	..	..	2,755	1,389	..	..	..	4,144
			FLAME TYPE.					
Davies	280	..	5,722	5,903	8	..	6	11,919
Hailwood	1,211	..	2,137	11,243	..	..	..	14,591
Naylor	..	..	1	224	..	..	..	225
Patterson	..	..	92	908	..	..	..	1,000
Premier	..	..	1	903	..	..	..	904
Thomas Williams	..	..	6,287	4,690	..	..	..	10,977
Wolfe	..	6	..	..	..	..	..	6
Total	1,876	6	17,963	27,781	8	..	6	47,640

9,806 were locked by lead rivets and 37,834 by magnetic means.

Table No. 12.

Statement of explosives used during 1939 at Mines under the Indian Mines Act.

Name of explosives.	Quantity of explosives used, in lb., in						
	Coal mines.	Mica mines.	Manganese mines.	Limestone mines.	Stone mines.	Other mines.	Total.
Dynamite	3,351	39,106	26,301	10	2,408	..	71,176
Gelatine	28	3,725	15,527	1,270	..	554	21,104
Gelignite	77,960	252,105	67,174	1,516	2,546	441,963	843,264
Monobel	..	..	250	4,905	..	..	5,155
Monobel A-2	34,107	..	..	..	..	..	34,107
Stonobel	195,680	..	..	..	..	..	195,680
Dynobel	588	..	..	..	..	..	588
Raunkol	30,028	..	..	..	..	..	30,028
Liquid Oxygen	79,869	..	..	..	..	..	79,869
Gunpowder	3,500,376	14,958	155,472	342,896	198,163	406,846	4,618,711
Picric Powder	..	..	..	..	454	..	454
Number of detonators used	1,088,676	2,254,896	608,084	6,488	32,495	706,129	4,696,768

APPENDIX II.

Accidents in Mines.

APPENDIX II.

ACCIDENTS IN MINES.

Table No. 1.

Fatal Accidents during the year 1939.

Serial Number.	Date and hour of accident.	Name, and situation of mine.	Name of owner.	Name, sex, age and occupation of person killed.	Name of mineral worked.	Cause of accident and remarks.
			FALLS OF ROOF AND SIDES.			
			(*a*) Falls of roof—(*95 deaths*).			
1	5th January, 2 P.M.	Chittidand mine, Golpur P. O., Punjab.	National Coal Co., Ltd.	Fazal, (*m.*), 30, *Loader.*	Coal .	While removing debris which had been dressed from the roof of a gateway, deceased was killed by a mass of shale which fell from the roof at a height of 4 feet. Inspection and inquiry made.
2	5th January, 4 P.M.	South East Baraboni mine, Charanpur P. O., Bengal.	Maharaja S. C. Nandy.	Topeshwar Chamar, (*m.*), 30, *Shot-firer.*	Coal .	While deceased was dressing down roof coal, which had been loosened by a shot, a mass of coal, 3′×1′×1′, fell prematurely from a height of 9 feet. Deceased lost his balance, fell on the floor and was caught by the fall. He sustained injuries which proved fatal three days later. Inspection and inquiry made.
3	7th January, 6-45 A.M.	Seetalpur mine, Dishergarh P. O., Bengal.	Bengal Coal Co., Ltd.	Anup Majhi, (*m.*), 50, *Coal-cutter.*	Coal .	While a miner was filling a basket with coal in a depillaring area a mass of roof shale, 6′ 6″×5′×3″, fell from a height of 9½ feet due to weighting. He was struck by the falling shale and fatally injured. Inspection and inquiry made.
4	8th January, 4 A.M.	Chittidand mine .	National Coal Co., Ltd.	Pulla, (*m.*), 25; Gul, (*m.*), 26, *Coal-cutters.*	Coal .	While working on a longwall face the deceased were killed by a mass of shale, 4′×3′×2′, which fell from between two "slips" in the roof at a height of 2 feet. Inspection and inquiry made.

5	9th January, 11-20 A.M.	Serampur mine, Giridih P. O., Bihar.	State Railways' Coal Department.	Dewki Chamar, (*m.*), 35; Amrit Dosad, (*m.*), 37, *Coal-cutters.*	Coal .	A number of miners was at work in a depillaring area when a violent "bump" occurred and dislodged a mass of roof stone, 16′×11′×5′. Two persons who were working near the edge of the fall were killed instantly and another person was seriously injured. Inspection and inquiry made.
6	9th January, 7 P.M.	Khewra mine, Khewra P. O., Punjab.	Government of India.	Mohd. Khan, (*m.*), 25, *Labourer.*	Rock salt.	While engaged in preparing a place for erecting supports in an underground tunnel, deceased was killed by a mass of rock, weighing 7 tons, which fell off the roof at a height of 8 feet. Inspection and inquiry made.
7	10th January, 2-30 P. M.	Bhulanbararee mine, Pathardihi P. O., Bihar.	Bhulanbararee Coal Co., Ltd.	Bonowari Ghatwar, (*m.*), 30, *Loader.*	Coal .	Deceased was sitting down in a gallery, when a mass of roof-coal, 2′×1′×6″ thick, fell on him from between two "cleats" at a height of 10 feet. He sustained serious injuries to which he succumbed three weeks later. Inspection and inquiry made.
8	13th January, 5-45 A. M.	Jamuria mine, Charanpur P. O., Bengal.	Equitable Coal Co., Ltd.	Budhan Dhobi, (*m.*), 38, *Coal-cutter.*	Coal .	Deceased was returning to his working place in a depillaring area after blasting, when due to "weighting" in an adjoining goaf a mass of roof stone, 20′ × 10′ × 2′, fell, dislodging several props, one of which struck deceased on the head, killing him on the spot. Inspection and inquiry made.
9	14th January, 4-30 A. M.	Bejdih mine, Sunderchak P. O., Bengal.	Equitable Coal Co., Ltd.	Ram Prosad Jat, (*m.*), 25, *Coal-cutter.*	Coal .	While deceased was loading coal in a gallery, 13½ feet high, a mass of coal, weighing about 15 cwt., fell from a concealed "slip" in the roof. He was struck and killed instantly. Inspection nnd inquiry made.
10	18th January, 7 P. M.	Rajur mine, Rajur P. O., Central Provinces.	Ballarpur Collieries Company.	Asada Lingu Asha, (*m.*), 20, *Loader.*	Coal .	While engaged in loading coal in a level gallery, deceased was fatally injured by a piece of shale, 3′ × 2′ × 8″, which fell from between two "slips" in the roof from a height of 5½ feet. Inspection and inquiry made.
11	5th January, 6-30 A. M.	Jainty Central mine, Karmatar P. O., Bihar.	Jainty Central Colliery Ltd.	Chamtu Meah, (*m.*), 45, *Coal-cutter.*	Coal .	Deceased left his appointed working place and was cutting coal from the side of a pillar, when a mass of roof stone, 45′ × 6′ × 2′, fell on him from a height of 4½ feet killing him instantly. Inspection and inquiry made.
12	8th February, 1-30 P. M.	Mugua mine, Domchanch P. O., Bihar.	Chrestien Mining Co., Ltd.	Budhon Gope, (*m.*), 27, *Driller.*	Mica .	While two drillers were engaged in drilling a hole in the roof of a gallery 6 feet high, a mass of rock, 3′ × 2′ ×1′, fell from the roof and fatally injured one of them. Inspection and inquiry made.

APPENDIX II—*contd.*

Fatal Accidents during the year 1939—*contd.*

Serial number.	Date and hour of accident.	Name, and situation of mine.	Name of owner.	Name, sex, age and occupation of person killed.	Name of mineral worked.	Cause of accident and remarks.
			FALLS OF ROOF AND SIDES—*contd.*			
			(a) Falls of roof—*contd.*			
13	8th February, 12-15 P.M.	Barmondia mine, Sitarampur P. O., Bengal.	New Beerbhoom Coal Co., Ltd.	Baul Bauri, (*m.*), 58, *Stone cleaner.*	Coal .	A gang of persons was engaged in cleaning up an old fall in a gallery when a thin piece of roof shale, about 6′×3′×1½″, fell from a height of 7 feet inflicting fatal injuries on one and serious injuries on another. Inspection and inquiry made.
14	14th February, 1-30 P.M.	Seebpur mine, Charanpur P. O., Bengal.	Katras Jherriah Cold Co., Ltd.	Bhawan Gararia, (*m.*), 40, *Coal-cutter.*	Coal .	While a miner was dressing down roof coal which had been loosened by a shot, a mass of coal, 6′×4′×6″, fell from a height of 16 feet. Deceased was struck and fatally injured. Inspection and inquiry made.
15	4th March, 4 A.M.	Parbelia mine, Neeturia P. O., Bihar.	Bengal Coal Co., Ltd.	Sahasram Routh, (*m.*), 57, *Loader.*	Coal .	While deceased was loading coal which had been blasted from the roof of a gallery he was fatally injured by a mass of coal, 6′×5′×6″, which fell upon him from a height of 7½ feet. Inspection and inquiry made.
16	5th March, 1-30 A.M.	Lakurka mine, Katrasgarh P. O., Bihar.	Lakurka Coal Co., Ltd.	Jadu Majhi, (*m.*), 30, *Loader.*	Coal .	While a loader was filling a basket with coal in a gallery, a mass of shale, 7′×1′ 6″×1′, fell from a concealed "slip" in the roof from a height of 6 feet and killed him instantly. Inspection and inquiry made.
17	10th March, 9 P.M.	Standard (Jharia Khas Section) mine, Jharia P. O., Bihar.	Standard Coal Co., Ltd.	Ramdas Chamar, (*m.*), 22; Ramabatar Chamar, (*m.*), 20, *Coal-cutters.*	Coal .	While two miners were at work in a gallery, a mass of stone, 12′×9′×1′, fell from the roof from a height of 9 feet and killed them instantly. The fall was due to a concealed "slip" parallel to the rise side of the gallery. Inspection and inquiry made.

18	12th March, 2 P.M.	Kajora mine, Kajoragram P. O., Bengal.	Roy Dutta & Co.	Atawari Roy, (*m.*), 32, *Timberman.*	Coal	A timberman and his two assistants were withdrawing props from a depillaring area, under the supervision of an overman when there were indications of "weighting" in the goaf. Deceased, while attempting to reach a place of safety, entered the open space from where props had been withdrawn, and was struck by a mass of roof coal, 2′ 6″×2′×1′, which fell from a height of 14 feet. He received serious injuries which proved fatal a few hours later. Inspection and inquiry made.
19	13th March, 11-45 P.M.	Jitpur mine, Bhaga P. O., Bihar.	Indian Iron and Steel Co., Ltd.	Sudharam Dhobi, (*m.*), 50, *Coal-cutter.*	Coal	While deceased was engaged in reducing a stook which had been holed through to a goaf, a piece of roof coal, 3′×3′×1′6″, fell from inside the goaf and fatally injured him. Inspection and inquiry made.
20	14th March, 2 P.M.	Kustore mine, Kusunda P. O., Bihar.	Raneegunge Coal Association, Ltd.	Joyram Teli, (*m.*), 35, *Coal-cutter.*	Coal	Deceased was killed by a mass of stone, 10′×8′×2′, which fell without warning from the two converging "slips" in the roof at a height of 10 feet. Inspection and inquiry made.
21	29th March, 8 P.M.	Katras-Choitodih mine, Katrasgarh P. O., Bihar.	Burrakur Coal Co., Ltd.	Geni Gope, (*m.*), 45, *Coal-cutter.*	Coal	Deceased was struck by a piece of stone, 3′×2′×3″, which fell from the roof at a height of 8 feet. He received injuries which proved fatal two hours later. Inspection and inquiry made.
22	31st March, 4-30 A.M.	Sodepur (Nos. 9 and 10 Pits) mine, Sunderchak P. O., Bengal.	Bengal Coal Co., Ltd.	Bhota Majhi, (*m.*), 56, *Coal-cutter.*	Coal	Deceased was loading coal which had been dressed from the roof of a gallery, 12 feet high, when a mass of roof coal, 8′×4′×2′6″, fell on him from between two concealed "slips". He sustained serious injuries to which he succumbed three and a half hours later. Inspection and inquiry made.
23	5th April, 5-15 P.M.	Bhagaband mine, Jharia P. O., Bihar.	Borrea Coal Co., Ltd.	Budhan Gope, (*m.*), 40, *Timberman.*	Coal	While props were being withdrawn from a depillaring area, a "stook" collapsed and a mass of roof stone, 4′×3′×1′, fell on deceased from a height of 9 feet. He sustained injuries which proved fatal 8 hours later. Inspection and inquiry made.
24	10th April, 3 P.M.	Kustore mine, Kusunda P. O., Bihar.	Raniganj Coal Association, Ltd.	Budhu Rout, (*m.*), 35, *Coal-cutter.*	Coal	While coal was being loaded in a depillaring area in a seam, 12 feet thick, a mass of coal, 5′×4′×4′, fell from the edge of a "canch" of roof coal. A miner was struck and fatally injured and a loader was seriously injured. Inspection and inquiry made.

APPENDIX II—*contd.*

Fatal Accidents during the year 1939—*contd.*

Serial number.	Date and hour of accident.	Name, and situation of mine.	Name of owner.	Name, sex, age and occupation of person killed.	Name of mineral worked.	Cause of accident and remarks.
			FALLS OF ROOF AND SIDES—*contd.*			
			(a) Falls of roof—*contd.*			
25	14th April, 7-35 A.M.	Hindusthan Lalpeth mine, Chanda P. O., Central Provinces.	Birla Brothers, Ltd.	Narsinghlu, (*m.*), 25, *Loader.*	Coal .	While a gang of ten loaders was engaged in loading coal, blasted from the side of a pillar, a mass of coal, 6′×4′×9″ fell from the roof from a height of 10 feet. Deceased sustained serious injuries to which he succumbed two days later and another loader was seriously injured. Inspection and inquiry made.
26	16th April, 6-30 P.M.	Loyabad mine, Bansjora P. O., Bihar.	Burrakur Coal Co., Ltd.	Dhibar Barhi, (*m.*), 35, *Labourer.*	Coal .	While a timberman and four labourers were setting cross-bars on a haulage road under bad roof, a mass of stone, 10′×6′×2′6″, fell from the roof and dislodged three temporary props which had been set under it. Deceased was killed instantly and another labourer was seriously injured. Inspection and inquiry made.
27	19th April, 11-30 A.M.	Dishergarh West mine, Dishergarh P. O., Bengal.	Equitable Coal Co., Ltd.	Bagrai Majhi, (*m.*), 32, *Coal-cutter.*	Coal .	While dressing roof coal in a depillaring area, deceased dislodged a mass of coal, measuring about 8′×3′×3′, which fell on him from a height of 7 feet, killing him on the spot. Inspection and inquiry made.
28	22nd April, 6 A.M.	Lodna (Nos. 4 and 5 Pits) mine, Jharia P. O., Bihar.	Lodna Colliery Co. (1920), Ltd.	Gulzar Meah, (*m.*), 35, *Loader.*	Coal .	Deceased was loading coal blasted from the roof of a gallery, 20 feet high, when a mass of roof coal, 10′×5′×2′, fell on him from between two concealed "slips". He was killed instantly. Inspection and inquiry made.
29	25th April, 5 A.M.	Poriapur mine, Churulia P. O., Santhal Parganas.	B. Mukherjea & Co.	Upendra Muchi, (*m.*), 32, *Coal-cutter.*	Coal .	While deceased was at work in a depillaring area, a mass of roof stone, 24′×8′×3′, fell from between two "slips" at a height of 9 feet, killing him instantly. Inspection and inquiry made.
30	27th April, 10-30 P.M.	Methani mine, Sitarampur P. O., Bengal.	Aldih Coal Co., Ltd.	Tribhan Kole, (*m.*), 45, *Coal-cutter.*	Coal .	Deceased was struck and fatally injured by a mass of coal, weighing about 1 cwt., which fell from the roof at a height of 11 feet. Inspection and inquiry made.

31	29th April, 9 P.M.	Standard mine, (Jharia Khas Section). Jharia P.O., Bihar.	Standard Coal Co., Ltd.	Bhiman Gowala, (*m.*), 30, *Coal-cutter.*	Coal .	Deceased and his companion were engaged in erecting a ladder to dress down loose coal after blasting in a gallery when a mass of roof coal, 5′×4′×1′6″, suddenly fell on him from a height of 20 feet. He succumbed to his injuries fifteen minutes later. Inspection and inquiry made.
32	28th April, 2 P.M.	Jamuria mine, Charanpur P.O., Bengal.	Equitable Coal Co., Ltd.	Muruli Bagdi, (*m.*), 45, *Coal-cutter.*	Coal .	Deceased was working at the back of a gallery, 12 feet high, by standing on a stool, when a mass of coal fell and upset it. He fell a distance of 5 feet and received injuries which proved fatal 37 hours later. Inspection and inquiry made.
33	29th April, 4 A.M.	Methani mine, Sitarampur P.O., Bengal.	Aldih Coal Co., Ltd.	Jahru Mahato, (*m.*), 32, *Coal-cutter.*	Coal .	Deceased left his appointed working place and went through a fence to rob coal from the side of a pillar. A mass of roof shale, 10′×1′6″×1′, fell on him from a height of 13 feet, killing him instantly. Inspection and inquiry made.
34	8th May, 4-30 P.M.	Bhamori mine, Parasia P.O., Central Provinces.	Amalgamated Coal-fields, Ltd.	Jodha Mochi, (*m.*), 30, *Coal-cutter.*	Coal .	While a miner was shovelling blasted coal in a gallery, he was struck by a mass of stone, 3′6″×2′×1′6″, which fell from between two converging "slips" in the roof, at a height of 7 feet. He sustained injuries to which he succumbed shortly afterwards. Inspection and inquiry made.
35	11th May, 12 noon.	Datla mine, Junnordeo P.O., Central Provinces.	Amalgamated Coal-fields, Ltd.	Sarjoo Brahmin, (*m.*), 37; Chhotelal Dhimar, (*m.*), 42, *Coal-cutters.*	Coal .	While the two deceased were resting in a gallery, 7 feet high, a mass of stone, 10′×5′×9″, fell from a "slip" in the roof and killed them instantly. If the place had been properly inspected after blasting, the accident would have been avoided. Inspection and inquiry made.
36	13th May, 9-15 A.M.	Sijua mine, Sijua P.O., Bihar.	Tata Iron & Steel Co., Ltd.	Baleswar Singh, (*m.*), 32, *Labourer.*	Coal .	While making a hole in the side of a pillar for erecting a cross-bar in a gallery, deceased was killed by a mass of roof coal, 6′6″×4′6″×1′6″, which fell off a concealed "slip" at a height of 7 feet. Inspection and inquiry made.
37	14th May, 5 P.M.	Mallakhel mine, Trag P. O., Punjab.	Chooni Lal Kapur.	Janat Mir, (*m.*), 25, *Coal-cutter.*	Coal .	While working in a narrow heading deceased was fatally injured by a mass of shale, 2′6″×1′6″×6″ which fell off the roof at a height of 6 feet. Inspection and inquiry made.
38	19th May, 5 P.M.	Dhemo Main mine, Sitarampur P. O., Bengal.	Dhemo Main Collieries, Ltd.	Etwari Chamar, (*m.*), 36, *Coal-cutter.*	Coal .	Deceased was working in a gallery being driven in a pillar under extraction when a "bump" occurred, causing a mass of roof stone, 10′×9′×3″, to fall from a height of 13 feet. He was caught by the fall and killed instantly. Inspection and inquiry made.

APPENDIX II—*contd.*

Fatal Accidents during the year 1939—*contd.*

Serial number.	Date and hours of accident.	Name and situation of mines.	Name of owner.	Name, sex, age and occupation of person killed.	Name of mineral worked.	Cause of accident and remark.
			FALLS OF ROOF AND SIDES—*contd.*			
			(*a*) Falls of roof—*contd.*			
39	31st May, 8 P.M.	Methani mine, Sitarampur P. O., Bengal.	Aldih Coal Co., Ltd.	Bhadu Singh, (*m.*), 37, *Coal-cutter.*	Coal .	Deceased was dressing down loose roof coal in a gallery, 10 feet high, when he accidentally struck a prop, causing a small piece of roof coal to fall on his head. He sustained injuries, which proved fatal 28 hours later. Inspection and inquiry made.
40	2nd June, 7 A.M.	Bejdih mine, Sunderchak P. O., Bengal.	Equitable Coal Co., Ltd.	Mongal Kumar, (*m.*), 35; Huro Kumar, (*m.*), 34; *Coal-cutter.*	Coal .	While a gang of five miners was walking along a level gallery at the end of their relay there was a sudden "bump", causing a fall of several tons of roof coal. One of them was killed on the spot and another succumbed to his injuries before he could be extricated. Inspection and inquiry made.
41	7th June, 2-30 A.M.	Banksimula mine, Charanpur P. O., Bengal.	Bengal Coal Co., Ltd.	Sim Shaw Turi, (*m.*), 36, *Labourers.*	Coal .	A mass of roof coal, 6′×3′×1′, fell from the edge of a goaf, dislodging a prop, 14 feet long, which struck deceased killing him instantly. Inspection and inquiry made.
42	9th June, 2-30 A.M.	Alkusa North mine, Kusunda P. O., Bihar.	Raneegunge Coal Association, Ltd.	Sannu Meah, (*m.*), 45, *Loader.*	Coal .	While coal was being loaded in a depillaring area a mass of roof coal, 4′×4′×1′6″, fell from a height of 18 feet on to one of the loaders and killed him instantly. If the roof had been properly tested after the firing of shots the accident would not have occurred. Inspection and inquiry made.
43	15th June, 4-30 A.M.	Sripur (Nos. 1, 2 & 3, Pits) mine, Kalipahari P. O., Bengal.	Lodna Colliery Co. (1920), Ltd.	Sahai Chamar, (*m.*), 39, *Coal-cutter.*	Coal .	While deceased was dressing coal from the side of a "stook" in a depillaring area, a mass of coal, 5′×4′×2′ 6″, fell from the roof, from a height of 8 feet. He was struck and fatally injured. Inspection and inquiry made.

44	15th June, 2 A.M.	Dhori mine, Bokaro P. O., Bihar.	Bokaro and Ramgarh Ltd.	Suku Majhi, (*m.*), 30, *Coal-cutter.*	Coal .	While deceased was loading fallen coal from the edge of an old goaf, a mass of coal 3′×2′ 3″×2′ 6″ thick rolled down and struck him. He received serious injuries to which he succumbed three hours later. Inspection and inquiry made.
45	16th June, 6 A.M.	Digwardih mine, Jealgora P. O., Bihar.	Tara Iron & Steel Co., Ltd.	Dukhan Bhuiya, (*m.*), 55, *Coal-cutter.*	Coal .	While working in a gallery, deceased was fatally injured by a triangular mass of coal, 12′ long, 3″ to 6′ wide and 1′ to 1′ 6″ thick, which fell from two concealed "slips" in the roof at a height of about 7 feet. Inspection and inquiry made.
46	23rd June, 6-30 P.M.	Victoria mine, Kulti P. O., Bengal.	New Beerbhoom Coal Co., Ltd.	Suchand Bhandary, (*m.*), 50, *Sirdar.*	Coal .	While a sirdar was supervising the withdrawal of props in a depillaring area, a mass of roof stone 10′×12′×1′ 6″, suddenly fell on him from a height of 6 feet. He was killed instantly. Inspection and inquiry made.
47	28th June, 9-30 P.M.	Parbelia mine, Nituria P. O., Bihar.	Bengal Coal Co., Ltd.	Hangsha Kora, (*m.*), 25, *Coal-cutter.*	Coal .	While deceased was shovelling coal on a conveyor face, he was struck and killed instantly by a mass of coal, 7′×3′×1′, which fell from a height of 6½ feet. The coal fell from a concealed "slip" and a clean "parting" in the roof. Inspection and inquiry made.
48	28th June, 3-40 P.M.	Baragolai mine, Margherita P. O., Assam.	Assam Railways and Trading Co., Ltd.	Bhakta Bahadur, (*m.*), 26, *Coal-cutter.*	Coal .	While putting away his tools at the end of his relay, deceased was struck and seriously inquired by a mass of coal, about 5 cwts. in weight, which fell from the roof of an "opening" at a height of 5 feet. He contracted Pneumonia from which he died seventeen days later. Inspection and inquiry made.
49	1st July, 4 A.M.	Sitanala mine, Bhojudih P.O., Bihar.	Mohatta Brothers.	Bideshi Mallick, (*m*), 35, *Coal-cutter.*	Coal .	Deceased was pushing an empty tub along a tramming level when the tub got derailed and dislodged a prop which had been set very near the tramline. A mass of coal, 1′8″×1′4″×3″ which had been supported on the prop, fell from the roof at a height of 10 feet and struck deceased, resulting in serious injuries which proved fatal some 5½ hours later. Inspection and inquiry made.
50	4th July, 4 P.M.	Eklehra mine, Parasia P.O., Central Provinces.	Amalgamated Coalfields, Ltd.	Chhotu Katwar, (*m*), 40, *Labourer.*	Coal .	While working at a hand pump in a gallery, 5 feet high, deceased was struck and killed instantly by a mass of stone, 12′×8′ 6″×10″, which fell unexpectedly from the roof. Inspection and inquiry made.

APPENDIX II—*contd.*

Fatal Accidents during the year 1939—*contd.*

Serial number.	Date and hour of accident.	Name and situation of mine.	Name of owner.	Name, sex, age and occupation of person killed.	Name of mineral worked.	Cause of accident and remarks.
			FALLS OF ROOF AND SIDES—*contd.*			
			(*a*) Falls of roof—*contd.*			
51	7th July, 8-30 P.M.	Mudidih mine, Sijua P.O., Bihar.	Burrakur Coal Co., Ltd.	Mongra Majhi, (*m.*), 25, *Coal-cutter.*	Coal .	During the extraction of a pillar of coal in a seam, 9½ feet thick, a miner was standing on a basket cutting down overhanging roof coal at the side of the pillar. While he was levering with his pick he overbalanced and fell to the floor and the coal which he was taking down fell on him, killing him instantly. Inspection and inquiry made.
52	11th July, 4-30 P.M.	Mudidih mine, Sijua P.O., Bihar.	Burrakur Coal Co., Ltd.	Khalil Khan, (*m.*), 24, *Labourer.*	Coal .	While props were being withdrawn from a depillaring area, by a 'Sylvester' prop withdrawer deceased attempted to recover a partially dislodged prop, when he was fatally injured by a mass of coal, 2′×2′×1′, which suddenly fell from between two "slips" in the roof at a height of 8 feet. Inspection and inquiry made.
53	13th July, 4 A.M.	Dhemo Main mine, Sitarampur P.O., Bengal.	Dhemo Main Coal Co., Ltd.	Rasuli Meah, (*m.*), 45; Hira Singh, (*m.*), 38, *Coal-cutters.*	Coal .	While pushing empty tubs at the entrance to a level haulage road in a dopillaring area, deceased was struck and fatally injured by a fall of roof coal weighing about 2 tons, which was dislodged by a "bump", and two other persons received serious injuries, one of whom subsequently died. Inspection and inquiry made.
54	15th July, 4 A.M.	Methani mine, Sitarampur P.O., Bengal.	Aldih Coal Co., Ltd.	Jagannath Dosad, (*m.*), 28, *Coal-cutter.*	Coal .	While filling coal at the edge of a goaf in a depillaring area, deceased was struck and killed instantly by a mass of roof stone, measuring 4′×3′×6″, which fell from a height of 15 feet. Inspection and inquiry made.

55	24th July, 4 A.M.	Balaghat mine, Bharweli P. O., Central Provinces.	Central Provinces Manganese Ore Co., Ltd.	Lodkhooram, (*m.*), 20, *Miner.*	Manganese ore.	While loading stone which had been blasted in a cross-cut driven from a winze, deceased was struck and killed instantly by a mass of stone, weighing about 1½ tons, which fell from the roof at a height of 6 feet. Inspection and inquiry made.
56	25th July, 5 A.M.	West Jamuria mine, Charanpur P. O., Bengal.	West Jamuria Coal Co., Ltd.	Mahabir Singh, (*m.*), 40, *Coal-cutter.*	Coal .	While deceased was resting in a gallery, a sudden "bump" in a neighbouring goaf caused a mass of roof coal, 4′×2′×2′, to fall on him from a height of 8 feet. He sustained serious injuries and died 7 days later. Inspection and inquiry made.
57	28th July, 1-30 P.M.	Dhemo Main mine, Sitarampur P. O., Bengal.	Dhemo Main Coal Co., Ltd.	Barka Majhi, (*m.*), 30, *Loader.*	Coal .	Deceased passed through a fence and was loading fallen coal from a disused gallery when a mass of roof coal, 9′×7′×1″, fell on him from a height of 9 feet. He was killed instantly. Inspection and inquiry made.
58	7th August, 4 P.M.	Sendra mine, Bansjora P. O., Bihar.	Sendra Coal Co., Ltd.	Jagoo Rai, (*m.*) 38, *Shot-firer.*	Coal .	While deceased was sitting on a haulage road adjoining a depillaring area, a triangular mass of roof coal, 4′6″×4′×7′ by 20′ in length fell off a "slip" at a height of 8 feet and killed him on the spot. Inspection and inquiry made.
59	15th August, 6-30 P.M.	Shivrajpur mine, Shivrajpur P. O., Bombay.	Shivrajpur Syndicate, Ltd.	Samalaya Pintia, (*m.*), 22, *Miner.*	Manganese.	Several persons were employed in a waste-filled overhand stope, when a mass of ore 7′×5′×2′, fell on deceased and killed him instantly. Two other persons were seriously injured. Inspection and inquiry made.
60	15th August, 2-30 P.M.	Kusunda & Nyadee mine, Kusunda P. O., Bihar.	Kosoonda & Nyadee Collieries Co.	Kartic Rajwar, (*m.*), 28; Janu Rajwar, (*m.*), 35; Sanichar Rajwar, (*m.*), 26, *Coal-carriers.*	Coal .	While work was in progress in a depillaring area in a seam 27 feet thick, a triangular mass of roof coal, 23′×20′×7′ by 3′ thick, fell off a "slip" adjacent to the pillar under extraction. Two coal carriers were struck and killed instantly by the falling coal and another coal carrier was seriously injured. He died three months later. Inspection and inquiry made.
61	29th August, 2-15 P.M.	Sendra mine, Bansjora P. O., Bihar.	Sendra Coal Co., Ltd.	Rohini Bhar, (*m.*), 32, *Labourer.*	Coal .	While deceased was setting a prop in a depillaring area, a mass of coal, 6′×2′×1′ 6″, fell from a "slip" in the roof at a height of about 10 feet and struck him. He sustained serious injuries and died about 3 hours later. Inspection and inquiry made.
62	1st September, 1-30 P.M.	Katras-Choitodih mine, Katrasgarh P. O., Bihar.	Burrakur Coal Co., Ltd.	Dost Mohammed, (*m.*), 26, *Coal-cutter.*	Coal .	While a miner was loading coal in a gallery, 10 feet wide and 7½ feet high, a mass of stone, 8′×4′×3′ 6″, fell from the roof. He was struck by the falling stone and killed instantly. Inspection and inquiry made.

APPENDIX II—*contd.*

Fatal Accidents during the year 1939—*contd.*

Serial Number.	Date and hour of accident.	Name, and situation of mines.	Name of owner.	Name, sex, age and occupation of person killed.	Name of mineral worked.	Cause of accident and remarks.
			FALLS OF ROOF AND SIDES—*contd.*			
			(*a*) Falls of roof—*contd.*			
63	7th September, 5 P.M.	Sodepur (Nos. 9 & 10 Pits) mine, Sunderchak P. O., Bengal.	Bengal Coal Co., Ltd.	Doman Rai, (*m.*), 37, *Coal-cutter.*	Coal .	A gang of miners was about to commence work in a depillaring area when a mass of roof stone fell from the edge of the goaf and knocked out several props, one of which struck deceased and fatally injured him. Inspection and inquiry made.
64	16th September, 8 A.M.	Rajhara mine, Rajhara P. O., Bihar.	Bengal Coal Co., Ltd.	Chhoton Singh, (*m.*), 30, *Coal-cutter.*	Coal .	While filling a basket with coal in an underground gallery, deceased was fatally injured by a mass of stone, 1′ 8″×1′×7″, which fell from the roof from a height of 7 feet. Inspection and inquiry made.
65	21st September, 3 P.M.	Balihari mine, Kusunda P. O., Bihar.	Balihari Colliery Co., Ltd.	Bhagirath Bauri, (*m.*), 27, *Coal-cutter.*	Coal .	While deceased was at work in a gallery, a mass of coal and shale, 15′×3′ 6″×3′×6″, fell from the roof from a height of 2½ feet and killed him instantly. A concealed "slip" at the side of the gallery caused the fall. Inspection and inquiry made.
66	21st September, 5-45 A.M.	Sendra mine, Bansjora P. O., Bihar.	Sendra Coal Co., Ltd.	Akloo Bhuiya, (*m.*), 27, *Loader.*	Coal .	While removing fallen coal in a depillaring area, deceased was struck and fatally injured by a mass of coal, 4′×1′ 6″×8″, which fell off a "slip" from the roof at a height of 10 feet. Inspection and inquiry made.
67	2nd October, 10 P.M.	Bhulanbararee mine, Pathardih P. O., Bihar.	Bhulanbararee Coal Co., Ltd.	Budhi Majhi, (*m*), 30, *Coal-cutter.*	Coal .	While dressing the roof of a gallery 7 feet high, deceased was fatally injured by a mass of coal, 1′ 6″×1′ 6″×3″, which fell off a concealed "slip" in the roof. Inspection and inquiry made.
68	3rd October, 9 P.M.	Makerwal mine, Trag P. O., Punjab.	R. S. L. Ishardas Kapur and another.	Gulahmad Khan, (*m.*), 25, *Coal-cutter.*	Coal .	Deceased was killed by a mass of shale, 3′×2′ 6″×7″, which fell from a "slip" in the roof at a height of 6 feet. Inspection and inquiry made.

69	10th October, 1 P. M.	Makerwal mine, Trag P. O., Punjab.	R. S. Lala Ishardas Kapur & another.	Yar Mohd., (*m.*), 32, *Loader.*	Coal .	Deceased was fatally injured by a mass of shale, 7′×2′×7″ which fell from the roof at a height of 5 feet in a depillaring area. Inspection and inquiry made.
70	11th October, 3 A. M.	Kurhurbaree Mine, Giridih P. O., Bihar.	State Railways' Coal Department.	Dukhy Passi, (*m.*), 30, *Coal-cutter.*	Coal .	A mass of stone fell from a "slip" running near the edge of a goaf and displaced a cog, which struck deceased, inflicting fatal injuries.
71	14th October, 10-15 A. M.	Ghugus Mine, Ghugus P. O., Central Provinces.	Sir Biseswardass Daga and M. B. Dadabhoy.	Adala Konda Malla, (*m.*), 28, *Trammer.*	Coal .	Deceased was loading a tub with coal in a gallery, when a mass of coal 5′×2′×6″ thick, fell on him from the roof at a height of 10 feet, without warning. He was killed on the spot.
72	14th October, 8-45 P. M.	Bhatdee mine, Mohuda P. O., Bihar.	Bengal Bhatdee Coal Co., Ltd.	Chutar Mahata, (*m.*), 34, *Engine driver.*	Coal .	While a new haulage rope was being wound on the drum of a haulage engine a prop was dislodged, and while preparations were being made to replace the prop a mass of stone, 4′×2′×12″, fell from the roof. The haulage engine driver was walking out of the haulage engine room when he was struck and fatally injured by the falling stone. Inspection and inquiry made.
73	16th October, 12 noon.	Parbella mine, Nituria P. O., Bihar.	Bengal Coal Co., Ltd.	Foudari Hazam, (*m*), 32, *Labourer.*	Coal .	While engaged in hydraulic sand-stowing operations in a goafed area, deceased was knocked down by a fall of roof coal and was suffocated by the stowing materials before he could be extricated. Inspection and inquiry made.
74	24th October, 6-10 P.M.	Amlabad mine, Jealgora P. O., Bihar.	Eastern Coal Co., Ltd.	Saturam Ahir, (*m.*), 39; Mutur Nunia, (*m.*), 35; *Coal-cutters.*	Coal .	While machine cut coal was being loaded in a gallery, 7 feet high, by three miners a mass of coal, 20′×9′×3′, fell from between two converging "slips" in the roof. The deceased were buried and killed instantly by the falling roof coal. Inspection and inquiry made.
75	25th October, 5 P.M.	Jainty Central mine, Karmatar P.O., Bihar.	Jainty Central Colliery Ltd.,	Tribhuban Turi, (*m.*), 25, *Coal-cutter.*	Coal .	While deceased was cutting roof coal in a gallery 4½ feet high, about 1 cwt. of coal loosened by his pick fell on him. He sustained injuries to which he succumbed five days later. Inspection and inquiry made.
76	26th October, 4-30 A.M.	Jamadoba mine, Jealgora P. O., Bihar.	Tata Iron & Steel Co., Ltd.	Durga Singh, (*m.*), 36, *Loader.*	Coal .	A loader went through the fence at the edge of a goaf to load coal which had fallen just inside the fence from the corner of the pillar under extraction. He was struck by a mass of stone 6′×2′×6″ which fell from the roof from a height of 12 feet and was fatally injured. Inspection and inquiry made.
77	26th October, 5-30 A.M.	Datla mine, Junnordeo P. O., Central Provinces.	Amalgamated Coal-fields, Ltd.	Sheojee Bhoyar, (*m.*), 30, *Loader.*	Coal .	While filling coal in a depillaring area, deceased was struck and fatally injured by a piece of roof coal, 1′9″×1′6″×8″, which fell from a height of 8½ feet. Inspection and inquiry made.

APPENDIX II—*contd.*

Fatal Accidents during the year 1939—*contd.*

Serial Number.	Date and hour of accident.	Name, and situation of mine.	Name of owner.	Name, sex, age and occupation of person killed.	Name of mineral worked.	Cause of accident and remarks.
			FALLS OF ROOF AND SIDES—*contd.*			
			(*a*) **Falls of roof**—*concld.*			
78	14th November, 12 midnight.	Eklehra mine, Parasia P. O., Central Provinces.	Amalgamated Coal-fields, Ltd.	Basoo Chamar, (*m.*), 28, *Coal-cutter.*	Coal .	While at work in a depillaring area, deceased was struck and fatally injured by a mass of roof shale, weighing about 2 cwt., which fell from a height of 5 feet. Inspection and inquiry made.
79	15th November, 11 P.M.	Lodna mine, Jharia P. O., Bihar.	Lodna Colliery Co., (1920), Ltd.	Bhulai Kori, (*m*), 39, *Assistant timberman.*	Coal .	Deceased went to remove a prop which had been dislodged by means of a safety prop withdrawer in a depillaring area in a seam, 8 feet thick, during the withdrawal of props, when he was seriously injured by a piece of stone, 2′×1′6″×1½″, which fell from the roof. He succumbed to injuries 22 days later. Inspection and inquiry made.
80	11th December, 3-30 P.M.	Sendra mine, Bansjora P. O., Bihar.	Sendra Coal Co., Ltd.	Matru Rewani, (*m.*), 45, *Labourer.*	Coal .	Deceased entered a goafed area to get a "lid", when a mass of stone 1′×9″×3″ fell on him from a height of 18 feet inflicting fatal injuries. Inspection and inquiry made.
81	12th December, 8 P.M.	Bhulanbararce mine, Pathardihi P. O., Bihar.	Bhulanbararee Coal Co., Ltd.	Pahalu Pasi, (*m.*), 30, *Loader.*	Coal .	Due to a sudden "bump" in a depillaring area, a mass of coal 2′×1′ 6″×1′ thick fell from two concealed "slips" in the roof at a height of about 8 feet and struck deceased who was carrying coal from his working place to the loading line. He received serious injuries to which he succumbed 10 days later. Inspection and inquiry made.
82	20th December, 4 A.M.	Junnordeo No. 2 mine, Junnordeo P. O., Central Provinces.	Central Provinces Syndicate, Ltd.	Kaloo Sing, (*m.*), 30, *Coal-cutter.*	Coal .	While loading coal in a depillaring area, deceased was struck and fatally injured by a fall of roof, 6′×3′ 6″×1′ 6″, which suddenly became dislodged from between two concealed "slips" at a height of 10 feet. Inspection and inquiry made.

83	20th December, 4-45 A.M.	Methani mine, Sitarampur P. O., Bengal.	Aldih Coal Co., Ltd.	Puran Roy, (*m.*), 48 ; Dukhi Kole, (*m.*), 30 ; *Coal-cutters.*	Coal .	While a gang of miners was cutting floor-coal in a depillaring area, a mass of shale, 25′×12′×6″ thick, fell on them from a height of 11 feet. Two were fatally injured and another miner sustained serious injuries. Inspection and inquiry made.
84	20th December, 5-30 A.M.	Jamadoba mine, Jealgora P. O., Bihar.	Tata Iron & Steel Co., Ltd.	Kashi Majhi, (*m.*), 34, *Coal-cutter.*	Coal .	While deceased was examining the roof in his working place in a depillaring area, a mass of shale, 2′×1′3″×4″=6″ thick, fell on him from the roof at a height of about 8 feet, causing fatal injuries. Inspection and inquiry made.
85	28th December, 12-30 P.M.	Serampur mine, Giridih P. O., Bihar.	State Railways' Coal Department.	Ibrahim Meah, (*m*), 25, *Coal-cutter.*	Coal .	Deceased was struck and fatally injured by a mass of roof shale, 2′6″×1′6″×6″, which fell from a height of 6 feet on a loading level. Inspection and inquiry made.

(*b*) Falls of sides (*85 deaths*).

86	2nd January, 11-30 A.M.	Baragolai mine, Margherita P. O., Assam.	Assam Railways and Trading Co., Ltd.	Hirasingh Chetri, (*m.*), 35, *Coal-cutter.*	Coal .	While at work in an "opening", deceased was struck and killed instantly by a mass of coal which fell from the side at a height of 12 feet. Inspection and inquiry made.
87	6th January, 6 P.M.	Sendra-Bansjora mine, Bansjora P. O., Bihar.	Sendra-Bansjora Colliery Co., Ltd.	Jamarali Meah, (*m.*), 35, *Coal-cutter.*	Coal .	In a depillaring area in a seam 6 feet thick, while deceased was filling a basket with coal, a slab of coal, 2′×1′6″×9″, burst off the rib along the side of the goaf. He was struck by the falling coal and sustained fatal injuries. Inspection and inquiry made.
88	8th January, 3-30 P.M.	Upperchalla mine, (Debour Division), Kodarma P. O., Bihar.	Chrestien Mining Co., Ltd.	Bira Mushahar, (*m.*), 40, *Contractor.*	Mica .	While deceased was engaged in cleaning an old pit, a mass of schist, 3′×2′6″×1′, fell from a "slip" in the side and killed him instantly. Inspection and inquiry made.
89	8th January, 6 A.M.	West Jamuria mine, Charanpur P. O., Bengal.	West Jamuria Coal Co., Ltd.	Naran Singh, (*m.*), 40, *Assistant timberman.*	Coal .	While a timberman and his two assistants were preparing to build a chock at the edge of a goaf under the supervision of an overman, a mass of coal, weighing about 6 cwt., suddenly fell from the side at a height of 9 feet and struck deceased. He received serious injuries which proved fatal 12 days later. Inspection and inquiry made.
90	20th January, 4-15 P. M.	Sendra-Bansjora mine, Bansjora P. O., Bihar.	Sendra-Bansjora Colliery Co., Ltd.	Etwari Bhuiya, (*m.*), 32, *Loader.*	Coal .	While filling his basket with coal, a loader was fatally injured by a mass of side-coal, 4′6″×3′6″×9″ thick, which fell on him from a height of 9 feet. Inspection and inquiry made.

APPENDIX II—*contd.*

Fatal Accidents during the year 1939—*contd.*

Serial Number.	Date and hour of accident.	Name, and situation of mine.	Name of owner.	Name, sex, age and occupation of person killed.	Name of mineral worked.	Cause of accident and remarks.
			FALLS OF ROOF AND SIDES—*contd.*			
			(*b*) **Falls of sides**—*contd.*			
91	21st January, 7-30 A.M.	Methani mine, Sitarampur P. O., Bengal.	Aldih Coal Co., Ltd.	Bonoari Roy, (*m.*), 40, *Coal-cutter.*	Coal	While deceased was loading a basket with coal near a pillar under extraction, he was struck and fatally injured by a mass of coal, 3′×2′×1′, which suddenly fell from the side at a height of 3½ feet. Inspection and inquiry made.
92	24th January, 12-30 P.M.	Bejdih mine, Sunderchak P. O., Bengal.	Equitable Coal Co., Ltd.	Bhukon Keot, (*m.*), 48, *Coal-cutter.*	Coal	Deceased was holding a light while a miner was levering down some overhanging coal in a gallery. A mass of coal, 1′×1′×9″, fell unexpectedly from a height of 8 feet and struck deceased who sustained fatal injuries. Inspection and inquiry made.
93	26th January, 5 A.M.	Sodepur (Nos. 9 & 10 Pits) mine, Sunderchak P. O., Bengal.	Bengal Coal Co., Ltd.	Masudan Mahato, (*m.*), 42, *Loader.*	Coal	While deceased was filling a basket with coal in a gallery driven through a pillar preparatory to depillaring, a mass of coal, 4′×2′×2′, fell from the side, due to weighting from the goaf. Deceased was caught by the fall and fatally injured. Inspection and inquiry made.
94	30th January, 7 P.M.	Jogta mine, Sijua P. O., Bihar.	Agabeg Brothers, Ltd.	Ujir Meah, (*m.*), 36, *Loader.*	Coal	During the course of extracting a pillar of coal in a seem 22 feet thick, a miner was dressing the side near the roof after firing a shot. A mass of coal weighing about 1 ton suddenly fell off a "cleat" from the point where he was dressing and it struck and killed instantly a loader who was showing him a light. A second piece of coal weighing about ½ ton fell immediately afterwards and broke the ladder on which the miner was working and he sustained serious injuries by falling 18 feet on to the floor. Inspection and inquiry made.

95	1st February, 6-30 A.M.	Bhulanbararee mine, Pathardihi P. O., Bihar.	Bhulanbararee Coal Co., Ltd.	Bisundew Singh, (*m.*), 48, Mungeswar Gope, (*m.*), 27, *Loaders.*	Coal .	While two loaders were robbing the side of a gallery, 16 feet high, a mass of coal, 20′×12′×1′6″, fell off a pronounced cleavage plane running parallel to the side. They were buried under the fallen coal and killed instantly. Inspection and inquiry made.
96	3rd February, 8 P.M.	Bhatdih mine, Mohuda P. O., Bihar.	Bengal Bhatdih Coal Co., Ltd.	Prafulla Kumar Singh, (*m.*), 38, *Overman.*	Coal .	While an overman was supervising the withdrawal of props in a depillaring area in a seam 9 feet thick, a mass of shale, 10′×1′6″×1′, fell from the right side of the gallery in which he was standing. The shale dislodged two props and fell on him from a height of 7 feet. He was fatally injured. Inspection and inquiry made.
97	4th February, 3-30 P.M.	Tirodi North mine, Tirodi P. O., Central Provinces.	Central Provinces Manganese Ore Co., Ltd.	Kalooram Gond, (*m.*), 33, *Labourer.*	Manganese ore.	Deceased was assisting to deepen a surface drain 16 feet deep, when a mass of side, measuring about 20′×9′×2′, fell on him. He was suffocated before he could be extricated from the fall. Inspection and inquiry made.
98	4th February, 2-30 P.M.	Central Sinidih mine, Katrasgarh P. O., Bihar.	B. Banerjee .	Birsa Ram, (*m.*), 23. *Coal-cutter.*	Coal .	While at work in an opencast excavation, deceased was partly buried by a mass of earth and stone, 20′×6′×10′, which fell from the side from a height of 20 feet. He received injuries which proved fatal the following day. Inspection and inquiry made.
99	9th February, 8 A.M.	Dishergarh West mine, Dishergarh P. O., Bengal.	Equitable Coal Co., Ltd.	Rupchand Kando, (*m.*), 36, *Loader.*	Coal .	While a loader was carrying a basket of coal from a place where depillaring operations were in progress, he was struck by a mass of coal, 8′×4′×1′6″, which fell from the side of a pillar and killed instantly. Inspection and inquiry made.
100	10th February, 1-30 A.M.	Methani mine, Sitarampur P. O., Bengal.	Aldih Coal Co., Ltd.	Banka Bouri, (*m.*), 26, *Coal-cutter.*	Coal .	It is presumed that deceased was sleeping at the side of a tramming level, when he was struck by a mass of coal, which fell from the side at a height of 5 feet. He was killed instantly. Inspection and inquiry made.
101	10th February, 2 P.M.	Sevalia mine, Sevalia P. O., Bombay.	Bombay, Baroda and Central India Railway.	Jam Mohamed Mohamed Razak, (*m.*), 40, *Labourer.*	Stone .	After blasting operations in a stone quarry, deceased, contrary to instructions, went to recover his hammer, when a mass of side, 4′×3′×2′6″, fell and killed him on the spot. Inspection and inquiry made.
102	14th February, 1-30 P.M.	Tisra mine, Jharia P. O., Bihar.	Dhanji Devji & Sons.	Rupu Singh, (*m.*) 40, *Coal-cutter.*	Coal .	While coal was being dressed from the side of a pillar after blasting, a mass of coal 14′×3′6″×1′3″ fell and struck deceased, who was holding a light for the person engaged in dressing. He received serious injuries and died 2½ hours later. Inspection and inquiry made.

APPENDIX II—*contd.*

Fatal Accidents during the year 1939— *contd.*

Serial Number.	Date and hour of accident.	Name, and situation of mine.	Name of owner.	Name, sex, age and occupation of person killed.	Name of mineral worked.	Cause of accident and remarks.
			FALLS OF ROOF AND SIDES—*contd.* (*b*) **Falls of sides**—*contd.*			
103	25th February, 7-30 P. M.	Bejdih mine, Sunderchak P. O., Bengal.	Equitable Coal, Co., Ltd.	Shib Charan Tati, (*m.*), 34, *Coal-cutter.*	Coal .	Deceased was cutting coal at the face of a "bench" in a depillaring area, when a mass of coal, 10′×6′×9″ thick, fell from the side from a height of 8 feet. He was struck and fatally injured. Inspection and inquiry made.
104	27th February, 11-30 A. M.	Baragolai mine, Margherita P. O., Assam.	Assam Railways and Trading Co., Ltd.	Budhiman Newar, (*m.*), 30, *Coal-cutter.*	Coal .	While deceased was at work in an 'opening' 75′×66′×30′ high, a mass of coal, weighing about a ton, fell from the side from a height of 15 feet. Deceased was struck and killed instantly. Inspection and inquiry made.
105	28th February, 12 Noon.	Bokaro mine, Bokaro P. O., Bihar.	East Indian Railway and Bengal Nagpur Railway.	Bedram Ramnamia, (*m.*), 26, *Earth-cutter.*	Coal .	While engaged in the removal of overburden in a quarry, an earth cutter was buried and killed instantly by a mass of earth, 4′×2′×2′, which fell from an undercut side at a height of 4 feet. Inspection and inquiry made.
106	2nd March, 5-30 A. M.	Khas Kirkend mine, Kusunda P. O., Bihar.	Khas Kirkend Colliery Co.	Prasadi Bhuiya, (*m.*), 30, *Coal-cutter.*	Coal .	While deceased was cutting coal from the side of a gallery, 7 feet high, a piece of coal, 2′×2′×5″, fell on him from a concealed "slip". He sustained serious injuries to which he succumbed five days later. Inspection and inquiry made.
107	7th March, 10 P. M.	Banksimula mine, Charanpur P. O., Bengal.	Bengal Coal Co., Ltd.	Bojrangi Pashi, (*m.*), 32, *Coal-cutter.*	Coal .	Deceased was levering coal from a "stook" in a depillaring area, when a mass of coal, weighing about 2 tons, suddenly fell from a pronounced cleavage plane. He was struck by the falling coal and killed instantly and four other persons were seriously injured. Inspection and inquiry made.
108	11th March, 6 30 A. M.	Dhemo Main mine, Sitarampur P. O., Bengal.	Dhemo Main Coal Co., Ltd.	Chaitoo Chamar, (*m.*), 32, *Coal-cutter.*	Coal .	A miner was struck and fatally injured by a mass of coal, weighing about 10 cwts., which fell from the side of a pillar, from a height of 6 feet. Inspection and inquiry made.

109	14th March, 10-30 A.M.	Bhowra mine, Jealgora P. O., Bihar.	Eastern Coal Co., Ltd.	Juhia Mahatan, (*f.*), 18, *Labourer.*	Coal .	While debris was being removed from a new incline cutting 18 feet deep and 14 feet wide, a piece of decomposed shale, 9′×5′×9″, fell from the side from a height of 9 feet. Deceased was struck and fatally injured and another person was seriously injured. Inspection and inquiry made.
110	17th March, 4-30 A.M.	Kustore mine, Kusunda P. O., Bihar.	Raneegunge Coal Association, Ltd.	Fatu Dosad, (*m.*), 48, *Loader.*	Coal .	While deceased was at work in a depillaring area a mass of coal, 3′×5′×9″, fell on him from a height of 7 feet from the side of a pillar. He was seriously injured and died 3 days later. Inspection and inquiry made.
111	25th March, 6-30 A.M.	Bejdih mine, Sundarchak P. O., Bengal.	Equitable Coal Co., Ltd.	Kanai Mondal, (*m.*), 38; Baiju Mahato, (*m.*), 34; *Coal-cutters.*	Coal .	While a number of miners was cutting floor coal in a depillaring area, a "bump" occurred, and a mass of coal weighing about 2 tons fell from the side at a height of 15 feet. Two of the miners were buried by the falling coal and killed instantly. Inspection and inquiry made.
112	29th March, 6 A.M.	Bejdih mine, Sundarchak P. O., Bengal.	Equitable Coal Co., Ltd.	Pitam Kumar, (*m.*), 30, *Coal-cutter.*	Coal .	While deceased was sitting at the side of a tramming level he was struck and fatally injured by a mass of coal weighing about ½ cwt., which fell from the side at a height of 8 feet. Inspection and inquiry made.
113	29th March, 8-30 A.M.	West Jamuria mine, Charanpur P. O., Bengal.	West Jamuria Coal Co., Ltd.	Bhuko Mahato, (*m.*), 40, *Loader.*	Coal .	While coal was being loaded in a depillaring area a "bump" occured in the goaf, causing about 10 tons of side coal to fall from a pronounced "slip" in an adjoining pillar. Deceased was caught by the fall and received serious internal injuries to which he succumbed 3 hours later. Inspection and inquiry made.
114	7th April, 3 A.M.	Dharmaband mine, Katrasgarh P. O.,	New Tetturiya Coal Co., Ltd.	Sikar Majhi, (*m.*), 38, *Coal-cutter.*	Coal .	While deceased was loading coal in a gallery, a mass of coal and stone, 5′×4′×3′, suddenly became dislodged from a hidden "slip" in the roof at a height of 9 feet. He sustained injuries which proved fatal within a few hours. Inspection and inquiry made.
115	11th April, 5-45 P.M.	Wah mine, Wah P. O., Punjab.	Associated Cement Companies, Ltd.	Gulab, (*m.*), 30, *Labourer.*	Lime-stone.	While levering down a mass of rock weighing 2 tons, deceased overbalanced and fell in front of it. He was killed on the spot and another labourer was seriously injured. Inspection and inquiry made.
116	13th April, 11-45 P.M.	Bejdih mine, Sunderchak, P.O., Bengal.	Equitable Coal Co., Ltd.	Baijnath Roy, (*m.*), 48, *Coal-cutter.*	Coal .	While deceased was filling a basket with coal in a gallery, 9 feet wide and 8 feet high, there was a severe "bump", when a fall of about 1 cwt. of coal from the side knocked out a prop, which struck deceased, inflicting fatal injuries. Inspection and inquiry made.

Fatal Accidents during the year 1939—*contd.*

Serial Number.	Date and hour of accident.	Name, and situation of mine.	Name of owner.	Name, sex, age and occupation of person killed.	Name of mineral worked.	Cause of accident and remarks.
			FALLS OF ROOF AND SIDES—*contd.*			
			(*b*) **Falls of sides**—*contd.*			
117	18th April, 4-30 A.M.	Ekra Khas mine, Bansjora P. O., Bihar.	Maharaja S. C. Nandy.	Ramadhin Pasi, (*m.*), 40, *Loader.*	Coal .	After a shot had been fired in roof coal in a depillaring area in a seam 20 feet thick, a miner was dressing the roof, when two loaders entered the place to load coal. Although warned to leave the place until dressing was completed, they commenced loading. A mass of coal weighing about 2 cwts. fell from the corner of a pillar and struck one of them, killing him instantly. Inspection and inquiry made.
118	27th April, 9-30 A.M.	Dishergarh West mine, Dishergarh P. O., Bengal.	Equitable Coal Co., Ltd.	Chaman Mahato, (*m.*), 38, *Timberman.*	Coal .	While deceased was erecting a sprag to secure the side of a level gallery, 7 feet high a mass of coal, weighing about a ton, fell away from a height of 6 feet and struck him, inflicting serious injuries which proved fatal 5 days later. Inspection and inquiry made.
119	9th May, 5-30 P.M.	Datla mine, Junnordeo P.O., Central Provinces	Amalgamated Coal-fields, Ltd.	Mahilal Mehra, (*m.*), 23, *Coal-cutter*	Coal .	While placing his tools near the corner of a pillar, a mass of coal, weighing about 7 cwt. fell on deceased from the side at a height of 9 feet. He was struck and received injuries which proved fatal 12 weeks later. Inspection and inquiry made.
120	10th May, 5 A.M.	Lodna (Nos. 4 & 5 Pits) mine, Jharia P. O., Bihar.	Lodna Colliery Co. (1920) Ltd.	Badri Tewari, (*m.*), 35; Jagdin Ahir, (*m.*), 25; *Loaders.*	Coal .	While loading coal from the side of a pillar after blasting, a mass of coal, 4′×3′×10″, fell from the side of the pillar from a height of 17 feet. The deceased were struck by the mass of coal and killed instantly, and another loader was seriously injured. Inspection and inquiry made.
121	11th May, 11-30 A.M.	Gua Mine, Gua P. O., Bihar.	Indian Iron & Steel Co., Ltd.	Sita Kui, (*f.*), 25, *Labourer.*	Iron Ore	While deceased was sitting near the side of a quarry, where some debris had accumulated a mass of this debris fell on her without warning. She was buried and was suffocated before she could be extricated. Inspection and inquiry made.

122	14th May, 7 A.M.	Bejdih mine, Sunderchak P. O., Bengal.	Equitable Coal Co., Ltd.	Marai Goraria, (*m.*), 30 ; Baijnath Dubey, (*m.*), 24 ; *Coal-cutters.*	Coal .	Four miners left their working place and entered a fenced area in order to obtain some loose coal, when a mass of coal, weighing about 2 tons fell from the side. The deceased sustained fatal injuries and the two other miners were seriously injured. Inspection and inquiry made.
123	16th May, 8 P.M.	Bhulanbararee mine, Pathardihi P. O., Bihar.	Bhulanbararee Coal Co., Ltd.	Modon Sen, (*m.*), 26, *Labourer.*	Coal .	While deceased was loading coal which had fallen from tubs on a tramline in a depillaring area, a mass of coal, 10′×8′×3′, fell from the side from a height of 8 feet and killed him instantly. Inspection and inquiry made.
124	16th May, 2-15 A.M.	East Bhuggutdih mine, Jharia P. O., Bihar.	East Bhuggutdih Colliery Co., Ltd.	Joti Bauri, (*m.*), 32, *Coal-cutter.*	Coal .	While robbing coal from the side of a pillar, deceased was struck by a mass of coal, 6′×4′×1′3″, which fell from the side from a concealed "slip" at a height of 6 feet. He sustained serious injuries to which he succumbed some 4 hours later. Inspection and inquiry made.
125	19th May, 12-30 A.M.	Ekra Khas mine, Bansjora P. O., Bihar.	Maharaja S. C. Nandy.	Bharasi Bhuiya, (*m.*), 30, *Loader.*	Coal .	While three loaders were filling their baskets in front of a pillar 22 feet high, which was being extracted, a mass of coal, weighing about 15 tons, fell off the side in which there was a "slip". One was killed instantly and another was seriously injured. Inspection and inquiry made.
126	27th May, 7-45 A.M.	Bhulanbararee mine, Pathardihi P. O., Bihar.	Bhulanbararee Coal Co., Ltd.	Natai Muchi, (*m.*), 44, *Loader.*	Coal .	While deceased was sitting in a gallery 14 feet in height, a mass of coal, 14′×115′×3′ thick, fell from the side of a pillar off a pronounced "cleavage plane" running parallel to the side. He was buried beneath the fall of coal and killed instantly. Inspection and inquiry made.
127	6th June, 5 P.M.	Barkui mine, Parasia P. O., Central Provinces.	Pench Valley Coal Co., Ltd.	Kamod Gond, (*m.*), 35, *Loader.*	Coal .	While deceased was filling coal in a depillaring area, a mass of coal fell from the side of the pillar under extraction and dislodged three props. He was struck by one of the props and received injuries which proved fatal two days later. Inspection and inquiry made.
128	7th June, 3-30 P.M.	Kurhurbaree mine, Giridih P. O., Bihar.	State Railways' Coal Department.	Chullo Telly, (*m.*), 29, *Coal-cutter.*	Coal .	While at work in a gallery deceased was seriously injured by a mass of coal, 3′6″×3′×1′3″ which fell off a "slip" from a side of the gallery at a height of 7 feet. He succumbed to his injuries four hours later. Inspection and inquiry made.
129	16th June, 12 Noon.	Rangakanali mine, Samdi P. O., Bengal.	Ram Sundar Ojha.	Ashu Bauri, (*m.*), 22, *Miner.*	Fireclay.	While at work in an excavation for fireclay, 26 feet deep, a miner was struck and fatally injured by a mass of overhanging stone, 6′×3′×4′, which fell from the side from a height of 3 feet. Another miner sustained serious injuries. Inspection and inquiry made.

APPENDIX II—*contd.*

Fatal Accidents during the year 1939—*contd.*

Serial Number.	Date and hour of accident.	Name, and situation of mine.	Name of owner.	Name, sex, age and occupation of person killed.	Name of mineral worked.	Cause of accident and remarks.
			FALLS OF ROOF AND SIDES—*contd.*			
			(*b*) Falls of sides—*contd.*			
130	17th June, 5-30 P. M.	Ekra Khas mine, Bansjora P. O., Bihar.	Maharaja S. C. Nandy.	Pitambar Lodh, (*m.*), 30, *Coal-carrier.*	Coal .	While at work in a depillaring area a coal carrier was struck and fatally injured by a mass of coal about 6 cwt. in weight, which fell off the side of a pillar at a height of 16 feet. Inspection and inquiry made.
131	29th June, 2 P.M.	Dishergarh West mine, Dishergarh P. O., Bengal.	Equitable Coal Co., Ltd.	Chotka Majhi, (*m.*), 35, *Loader.*	Coal .	While four loaders were filling coal after blasting at a junction of four galleries in a depillaring area, a mass of coal, 9′ ×5′ ×1′, fell from the side of an adjoining pillar and dislodged several props. Deceased was struck by one of the props and killed instantly. Inspection and inquiry made.
132	8th July, 11 A.M.	Sodepur Nos. 9 and 10 Pits mine, Sunderchak P. O., Bengal.	Bengal Coal Co., Ltd.	Bondhu Bauri, (*m.*), 25; Guhiram Bauri (*m.*), 27; *Labourers.*	Coal .	While a stone-cutter and two labourers were engaged in cleaning stones from a dip gallery, adjoining a goaf, a 'bump' occurred, causing a mass of coal, 50′ ×9′ ×2′, to fall from the side. The labourers were struck and killed instantly. Inspection and inquiry made.
133	11th July, 10 P.M.	Sripur (Nos. 1, 2 and 3 Pits) mine, Kalipahari P. O., Bengal.	Lodna Colliery Co. (1920), Ltd.	Lochu Majhi, (*m.*), 25, Loader.	Coal .	While deceased was filling a basket with coal in a gallery he was struck and fatally injured by a mass of side-coal, 4′×4′×2′6″, which fell on him from a height of 7 feet. Inspection and inquiry made.
134	12th July, 3-30 P.M.	Kusunda and Nyadee mine, Kusunda P. O., Bihar.	Kusunda and Nyadee Collieries Co.	Hari Charan Beldar, (*m.*), 45, Coal-cutter.	Coal .	While deceased was cutting floor coal in a quarry, 35 feet deep, a mass of coal and stone weighing abut 40 tons slipped from the side and he was struck and killed instantly. The fall of side was due to rain water precolating down the inclined face of a "slip". Inspection and inquiry made.

135	15th July, 1-15 A.M.	Serampore mine, Giridih P. O., Bihar.	State Railways' Coal Department.	Jitan Turi, (*m.*), 38, *Coal-cutter.*	Coal	While a gang of miners was engaged in cleaning an old roadway adjoining a depillaring area, a "bump" occurred causing a mass of coal, 5′×4′×6′, to fall from a side of the roadway at a height of 5 feet killing deceased on the spot. Inspection and inquiry made.
136	20th July, 9 P.M.	Baragolai mine, Margherita P. O., Assam.	Assam Railways and Trading Co., Ltd.	Sher Bahadur, (*m.*), 32, *Coal-cutter.*	Coal	While working in an "opening", deceased was struck and fatally injured by a mass of coal, about 5 cwts. in weight which fell from the side, from a height of 15 feet. Inspection and inquiry made.
137	22nd July, 11-10 P.M.	Burra Dhemo mine, Sitarampur P. O., Bengal.	Burra Dhemo Coal Co., Ltd.	Parameswar Singh, (*m.*), 58, *Loader.*	Coal	Deceased was engaged in carrying coal in a depillaring section of a mine, when a mass of coal, 4′×3′×2′ 6″, fell from the side, from a height of six feet, from between two converging "slips". He was severely injured and died seventeen hours later. Inspection and inquiry made.
138	25th July, 4 P.M.	Bejdih mine, Sunderchak P. O. Bengal.	Equitable Coal Co., Ltd.	Parosh Pandit, (*m.*), 50, *Coal-cutter.*	Coal	While a number of persons was working in a depillaring area, a mass of coal, 7′×4′×1′, fell from a height of 15 feet from the side of a pillar under extraction. Deceased was struck and sustained injuries which proved fatal shortly afterwards. Inspection and inquiry made.
139	26th July, 12 NOON.	Singaran mine, Toposi P. O., Bengal.	Singaran Coal Syndicate Ltd.	Atika Hari, (*m.*), 38, *Coal-cutter.*	Coal	Deceased was dressing down loose coal from the side of a pillar when a mass of coal, 16′×8′×1′, fell on him from a height of 12 feet. He was killed instantly. Inspection and inquiry made.
140	1st August, 10-30 A.M.	Bulliaree mine, Kusunda P. O., Bihar.	East Indian Coal Co., Ltd.	Lachmi Shaw, (*m.*), 26, *Labourer.*	Coal	While deceased was cleaning the floor of a gallery 17 feet high in a depillaring area, a mass of coal, weighing about 1 ton, fell from the corner of a pillar. He was struck by the falling coal and received injuries to which he succumbed 4 days later. Inspection and inquiry made.
141	10th August, 1 P.M.	Lalki mine, Domchanch P. O. Bihar.	Chrestien Mining Co., Ltd.	Keshar Chasha, (*m.*), 36, *Driller.*	Mica	While deceased was engaged in preparing holes in the sides of a stope drive, he was struck and fatally injured by a mass of schist, weighing about 2 cwt., which fell from the hanging wall from a height of about 3 feet. Inspection and inquiry made.
142	13th August, 5 P.M.	Chandosole prospecting mine, Chakai P. O., Bihar.	Chrestien Partnership.	Rahara Majhi, (*m.*), 22, *Miner.*	Mica	While at work at the bottom of an open excavation, 18′×9′×14′ deep, deceased was buried under a large mass of earth, which suddenly fell from the side. He was dead when extricated. Inspection and inquiry made.

APPENDIX II—*contd.*

Fatal Accidents during the year 1939—*contd.*

Serial Number.	Date and hour of accident.	Name and situation of mine.	Name of owner.	Name, sex, age and occupation of person killed.	Name of mineral worked.	Cause of accident and remarks.
			FALLS OF ROOF AND SIDES—*contd.*			
			(*b*) Falls of sides—*contd.*			
143	23rd August, 9-30 P.M.	Dhemo Main mine, Sitarampur P. O., Bengal.	Dhemo Main Coal Co., Ltd.	Gonesh Turi, (*m.*), 32, *Coal-cutter.*	Coal .	While deceased and another coal-cutter were engaged in splitting a pillar preparatory to extraction, a severe "bump" occurred in the goaf, causing several tons of coal to fall from the sides of pillars. Deceased was caught by the fall and fatally injured, and his companion escaped with minor injuries. Inspection and inquiry made.
144	26th August, 4 P.M.	Bhurha mine, P. O. Jhuri-Telaiya, Bihar.	Smt. Gouri Kumari Devi.	Abdul Mian, (*m.*), 30, *Driller.*	Mica .	While persons were engaged in drilling shot-holes at the bottom of a sinking shaft, 63 feet deep, a mass of soft stone 4′×2′×2′ suddenly fell from the side, from a height of 28 feet. One of the men was fatally injured and another sustained serious injuries. Had the soft sides of the shaft been supported the accident would not have occurred. Inspection and inquiry made.
145	28th August, 3-15 P.M.	South Bulliari-Kendwadih mine, Kusunda P. O., Bihar.	East Indian Coal Co., Ltd.	Gohan Bhuiya, (*m.*), 26, *Loader.*	Coal .	While at work in a depillaring area deceased was seriouly injured by a mass of coal, 4′×2′×1′ 6″, which fell from a side of a pillar at a height of 8 feet. He succumbed to his injuries 7 hours later. Another loader was seriously injured. Inspection and inquiry made.
146	29th August, 10-15 P.M.	Dhemo Main mine, Sitarampur P. O., Bengal.	Dhemo Main Coal Co., Ltd.	Hanif Meah, (*m.*), 30, *Loader.*	Coal .	While deceased was carrying coal in a depillaring area, mass of coal, 2′×2′×1′, fell from the side at a height of 11 feet. Deceased was struck by the coal, and sustained fatal injuries. Inspection and inquiry made.

147	30th August, 12 Noon.	Jambad Selected mine, Kajoragram P. O., Bengal.	Devji Ghelabhai & Bros.	Sujan Majhi, (*m.*), 45, *Coal-cutter.*	Coal .	While robbing coal from a fenced off gallery, deceased was fatally injured by a mass of coal, 4′×2′ 6″×2′, that fell on him from the side of a pillar at a height of 14 feet. Inspection and inquiry made.
148	26th September, 10 P.M.	Lodna (Nos. 4 & 5 Pits) mine, Jharia P. O., Bihar.	Lodna Colliery Co., (1920), Ltd.	Angan Pashi, (*m.*), 38, *Coal-cutter.*	Coal .	While coal was being loaded in a depillaring area in a seam, 26 feet thick, a mass of coal, 25′×12′×3′, fell without warning from the side of a pillar under extraction. Deceased was struck and killed instantly by the falling coal. Inspection and inquiry made.
149	27th September, 5 A.M.	Datla mine, Junnordeo P. O., Central Provinces.	Amalgamated Coal-fields, Ltd.	Mulloo Gond, (*m.*) 28, *Timberman.*	Coal .	While engaged in setting props in a level gallery preparatory to the extraction of a pillar, deceased was struck and killed instantly by a piece of coal, 3′×2′×1′, which fell from the side of a pillar at a height of 9 feet. Inspection and inquiry made.
150	28th September, 12 Noon.	Dhemo Main mine, Sitarampur P. O., Bengal.	Dhemo Main Coal Co., Ltd.	Sabrati Meah, (*m.*), 36, *Coal-cutter.*	Coal .	While a number of persons was at work in a dip gallery adjacent to a depillaring area, a "bump" occurred causing several tons of coal to fall from the side. Deceased was struck and fatally injured, and another coal-cutter received serious injuries. Inspection and inquiry made.
151	28th September, 5 P.M.	Sarlaiya mine, Kodarma P. O., Bihar.	Hazaribagh Mica Mining Co., Ltd.	Lakho Gope, (*m.*), 36, *Miner.*	Mica .	While deceased was working in a shallow prospecting pit, 7′×5′×6′ deep, he was buried by a mass of earth, 4′×2′×1′, which fell from the side from a height of 4 feet. He sustained injuries which proved fatal 29 hours later. Inspection and inquiry made.
152	4th October, 12-30 A.M.	Bhowra mine, Jealgora P. O., Bihar.	Eastern Coal Co., Ltd.	Bipath Bhuiya, (*m.*), 28, *Loader.*	Coal .	While coal was being loaded in a machine cut gallery 8 feet high, a mass of coal, weighing 1 ton, fell from a "slip" at the rise side. Deceased was killed instantly by the falling coal and another loader was seriously injured. Inspection and inquiry made.
153	7th October, 11 P.M.	Dhemo Main mine, Sitarampur P. O., Bengal.	Dhemo Main Coal Co., Ltd.	Janki Dusad, (*m.*), 35, Bholu Dusad, (*m.*), 30, *Coal-cutters.*	Coal .	While miners were engaged in extracting a pillar, a "bump" occurred, causing extensive falls of coal from the sides of pillars adjoining a goaf. The deceased were killed on the spot and another miner sustained serious injuries. Inspection and inquiry made.

APPENDIX II—*contd.*

Fatal Accidents during the year 1939—*contd.*

Serial Number.	Date and hour of accident.	Name and situation of mine.	Name of owner.	Name, sex, age and occupation of person killed.	Name of mineral worked.	Cause of accidents and remarks.
			FALLS OF ROOF AND SIDES—*concld.*			
			(*b*) FALLS OF SIDES—(*concld*).			
154	14th October, 6-30 A.M.	Sendra mine, Bansjora P. O., Bihar.	Sendra Coal Co., Ltd.	Fagu Turi, (*m.*), 36, *Loader.*	Coal .	While coal, blasted off the face of a pillar, 12 feet high, which was under extraction, was being loaded, a piece of coal weighing about 30 lbs. fell from the side near the roof. A coal loader was struck and fatally injured by the falling coal. If the place had been properly dressed and examined after blasting, the accident would have been avoided. Inspection and inquiry made.
155	25th October, 8-30 A.M.	Hindubagh mine, Hindubagh P. O., Baluchistan.	Baluchistan Chrome Co., Ltd.	Jafar, (*m.*), 30, *Miner.*	Chromite	Deceased was struck and fatally injured by a mass of rock 5′×3′×2′, which he had dislodged by a crowbar from the face of a quarry at a height of 6 feet. Inspection and inquiry made.
156	25th October, 2-30 P.M.	Dhemo Main mine, Sitarampur P. O., Bengal.	Dhemo Main Coal Co., Ltd.	Hurroo Meah, (*m.*), 45, *Coal-cutter.*	Coal .	While the loading of coal was about to commence in a depillaring area, a severe "bump" occurred in an adjacent goaf, causing several hundred tons of coal to fall from the sides. Deceased was knocked down and killed instantly by a mass of coal falling on him. Inspection and inquiry made.
157	27th October, 9 A.M.	Jamadoba mine, Jealgora P. O., Bihar.	Tata Iron & Steel Co., Ltd.	Gyandram Bilaspuri, (*m.*), 23, *Loader.*	Coal .	While two loaders were sleeping near the side of a loading line in a depillaring area, a mass of coal, 16′×6′×2′, fell from the side and killed one instantly and the other was seriously injured. They should not have slept in close proximity to a place where a pillar was under extraction. Inspection and inquiry made.
158	30th October, 8 A.M.	Paikhel mine, Kalabagh P. O., Punjab.	Lal Chand Kalra .	Mohammad, (*m.*), 30, *Stone-cutter.*	Stone .	While working in an open excavation deceased was killed by a fall of side which was undercut. Inspection and inquiry made.

159	8th November, 4-30 A.M.	Sodepur (Nos. 9 and 10 Pits) mine, Sunderchak P. O., Bengal.	Bengal Coal Co., Ltd.	Baria Majhi, (*m.*), 32, *Coal-cutter.*	Coal.	While a number of persons was removing fallen coal from a disused gallery, a mass of coal, 4′× 2′6″× 1′, fell from the side at a height of 5 feet. Deceased was struck and fatally injured and another person received serious injuries. Inspection and inquiry made.
160	20th November, 2 P.M.	Dhori mine, Bokaro P. O., Bihar.	Bokaro & Ramgur, Ltd.	Lakhiram Majhi, (*m.*), 25, *Loader.*	Coal.	While deceased was loading coal in a gallery adjoining a depillaring area, a mass of coal 7′× 6′× 1′ thick, fell unexpectedly from a concealed "slip" in the side at a height of about 4 feet and struck him inflicting fatal injuries. Inspection and inquiry made.
161	20th November, 7·30 P.M.	Lodna (Nos. 4 & 5 Pits) mine, Jharia P. O., Bihar.	Lodna Colliery Co. (1920), Ltd.	Sambhari Pasi, (*m.*), 36, *Coal-cutter.*	Coal.	While deceased was dressing the side of a gallery, 26 feet high, he dislodged a mass of coal weighing about 50 lbs., from a height of 7 feet. The coal struck him and he sustained a compound fracture of the left knee cap. He died two months later. Inspection and inquiry made.
162	12th December, 3 A.M.	Serampur mine, Giridih P. O., Bihar.	State Railways' Coal Department.	Shiblal Teli, (*m.*), 38, *Coal-cutter.*	Coal.	While carrying a basket of coal deceased was struck by a piece of coal, 2′×2′×1′6″, which fell from a "slip" at a height of 7 feet in the side of a gallery. He sustained injuries to which he succumbed a few hours later. Inspection and inquiry made.
163	18th December, 6 P.M.	Narwaha mine, Sidhbari P. O., Punjab.	Pandit Siri Dhar.	Hira, (*m.*), 32, *Labourer.*	Slate.	While employed in a quarry a stone fell from the side and struck deceased on the head. He sustained injuries to which he succumbed 4 hours later.
164	23rd December, 5 P.M.	Hindubagh mine, Hindubagh P. O., N.-W. F. Province	Baluchistan Chrome Company, Ltd.	Roza Din, (*m.*), 22, *Cooly.*	Chromite.	While employed in a quarry a mass of stone 2′ × 1′6″×1′, fell from the side and killed deceased on the spot.
		IN SHAFTS (ROPES AND CHAINS BREAKING)—(*1 death*).				
165	13th May, 3 P.M.	Buria mine, Tisri P. O., Bihar.	Moni Ram . .	Ahmad Meah, (*m.*), 25, *Labourer.*	Mica .	While a loaded bucket was being hoisted up a shaft 45 feet deep, the rope broke and the bucket fell to the bottom. Deceased, who was working at the bottom of the shaft, was struck and killed instantly. Inspection and inquiry made.

APPENDIX II—*contd.*

Fatal Accidents during the year 1939—*contd.*

Serial Number.	Date and hour of accident.	Name and situation of mine.	Name of owner.	Name, sex, age and occupation of person killed.	Name of mineral worked.	Cause of accident and remarks.
	IN SHAFTS (WHILST ASCENDING OR DESCENDING BY MACHINERY) - (*1 death*).					
166	14th January, 8-15 P. M.	Charanpur mine, Charanpur P. O., Bengal.	Apcar Collieries, Ltd.	Nabi Sheikh, (*m.*), 32, *Stone-cutter.*	Coal .	While four persons, including deceased, were descending a shaft 450 feet deep, in a cage, the winding rope suddenly slipped off the pulley and the cage dropped uncontrolled for a short distance. Deceased was thrown out of the cage and fell to the bottom of the shaft, a distance of about 400 feet. He was killed instantly. Inspection and inquiry made.
	IN SHAFTS (FALLING DOWN SHAFT)—(*4 deaths*).					
167	28th February, 11-30 A. M.	Khas Joyrampur mine, Jharia P. O., Bihar.	Seth Tarachand Ghanshyamdass.	Ramzan Meah, (*m.*), 32, *Fitter.*	Coal .	While a column of steam pipes, 3″ in diameter, was being lowered down a shaft 303 feet deep, the lashing chain attached to the bottom pipe slipped and allowed the column to fall to the shaft bottom. The falling pipes struck the cage on which deceased, who had descended the shaft to release a socket of one of the pipes off a bunton, was standing. Deceased fell to the bottom of the shaft through a distance of about 150 feet and was killed instantly. Inspection and inquiry made.
168	24th March, 11 P. M.	Pinalgoria mine, Nawagarh P. O., Bihar.	Jiwan Gangi .	Dingal Kurmi, (*m.*), 39, *Pumpman.*	Coal .	Deceased accidentally fell to the bottom of a pumping shaft through a distance of about 11 feet. He sustained internal injuries and died 24 days later. Inspection and inquiry made.
169	29th March, 2-30 A. M.	Bararee mine, Jealgora P. O., Bihar.	East Indian Coal Co., Ltd.	Jagdeo Jeswara, (*m.*), 30, *Labourer.*	Coal .	While a tub of coal was being raised in a shaft 215 feet deep it fouled the cage receiving guide rails at the banking level because it was not properly secured in the cage by the tub-stops. Deceased was assisting in securing the tub and replacing it in the cage when the tub overbalanced and fell from the cage to the bottom of the shaft. He also overbalanced and fell 207 feet to the bottom of the shaft and was killed instantly. Inspection and inquiry made.

170	17th September, not known.	Loharwara mine, Nasirabad P. O., Rajputana.	Kanhaiya Lall and Co.	Pancha, (*m.*), 30, *Miner.*	Mica .	While returning to his working place deceased slipped and was fatally injured by falling into an unfenced disused shaft, 20 feet in depth. Inspection and inquiry made.
		IN SHAFTS (THINGS FALLING DOWN SHAFT)—(*8 deaths*).				
171	18th February, 2 P.M.	Karikole mine, Deori P.O., Bihar.	Indian Mica Supply Co., Ltd.	Batan Chamar, (*m.*), 35, *Labourer.*	Mica .	While engaged in timbering a shaft, 40 feet deep, deceased was struck and fatally injured by a piece of stone weighing about 16 lbs., which fell from the side from a height of 10 feet. Inspection and inquiry made.
172	6th April, 1-30 P.M.	Chanch mine, Chirkunda P.O., Bihar.	Bengal Coal Co., Ltd.	Mongla Majhi, (*m.*), 38, *Trammer.*	Coal .	Deceased with another trammer was engaged in re-railing a loaded tub, the front wheels of which had fallen into the sump of a shaft, 550 feet deep, when pieces of stone fell from the side of the shaft and struck deceased on the head. He was killed instantly. Inspection and inquiry made.
173	26th April, 9 P.M.	Anupnagar mine, Searsole Rajbari P.O., Bengal.	Aluminium Corporation of India, Ltd.	Upashi Singh, (*m.*), 40, *Sinker.*	Coal .	While a gang of sinkers was at work at the bottom of a sinking shaft, 410 feet deep, a piece of stone fell from the side and struck deceased on the head. He was killed instantly. Inspection and inquiry made.
174	3rd May, 10 A.M.	Saltore mine, Nituria P.O., Bihar.	Burrakur Coal Co., Ltd.	Saik Isahak, (*m.*), 35, *Labourer.*	Coal .	Preparatory to ascending a shaft 615 feet deep, deceased had stepped into a cage at the shaft bottom, when a large mass of stone fell from the shaft side from a height of 465 feet on to the cage, which was badly damaged. Deceased sustained injuries which proved fatal shortly afterwards. Inspection and inquiry made.
175	24th May, 4 P.M.	Lakargarhwa mine, Domchanch P.O., Bihar.	Indian Mica Supply Co., Ltd.	Banwari Rai, (*m.*), 18, *Onsetter.*	Mica .	A bucket filled with debris was being hoisted up a shaft, 56 feet deep, when it became disconnected from the hook, and fell to the bottom of the shaft. Deceased, who was standing at the bottom of the shaft, was struck and killed instantly. Inspection and inquiry made.
176	8th June, 1 A.M.	Ekra Khas mine, Bansjora P.O., Bihar.	Maharaja S. C. Nandy.	Jamuna Singh, (*m.*), 24, *Sinker.*	Coal .	In a sinking pit a bucket full of stone was hoisted and landed on a trolley. The bucket was not placed properly on the trolley and as the latter was being pulled from the shaft the bucket tipped and fell to the bottom of the shaft through a distance of 32 feet. A sinker was struck and fatally injured. Another sinker sustained serious injuries. Inspection and inquiry made.

APPENDIX II—*contd.*

Fatal Accidents during the year 1939—*contd.*

Serial Number.	Date and hour of accident.	Name and situation of mine.	Name of owner.	Name, sex, age and occupation of person killed.	Name of mineral worked.	Cause of accident and remarks.
		IN SHAFTS (THINGS FALLING DOWN SHAFT)—*concld.*				
177	8th July, 4-15 P.M.	Digwardih mine, Jealgora P .O., Bihar.	Tata Iron & Steel Co., Ltd.	Bhagi Singh, (*m.*), 25, *Stone-cutter.*	Coal.	While loading debris in a bucket at the bottom of a sinking shaft, 170 feet deep, deceased was struck on the head and killed instantly by a piece of stone, 8″×5″×4″, which fell from the side of the shaft from a height of at least 40 feet. Inspection and inquiry made.
178	11th August, 2 P.M.	Serampur mine, Giridih P. O., Bihar.	State Railways' Coal Department.	Bhiko Meah, (*m.*), 35, *Trammer.*	Coal.	The bolts securing an iron plate, 11″×3″×¾″ to cage guides at the top of a shaft became loose and the plate fell down the shaft 464 feet deep and struck deceased. He was fatally injured. Inspection and inquiry made.
		SUFFOCATION BY GASES.—(*1 death*).				
179	2nd June, 3-30 P.M.	Kongon and Borjan mine, Kongnyu P. O., Assam.	Nazira Coal Co., Ltd.	Pit Bahadur, (*m.*), 30, *Labourer.*	Coal.	Deceased entered an underground gallery with the object of plastering one of a number of stoppings surrounding a goaf, when he was overcome by noxious gases and asphyxiated. Inspection and inquiry made.
		BY EXPLOSIVES.—(*17 deaths*).				
180	25th January, 5-30 P.M.	Jamuria mine, Charanpur P. O., Bengal.	Equitable Coal Co., Ltd.	Mithoo Chamar, (*m.*), 40, *Coal-cutter.*	Coal.	During blasting operations, deceased with others withdrew to what was regarded as a place of safety. A shot was fired and blew into an adjacent gallery, projecting pieces of coal. Deceased was struck and sustained injuries to which he succumbed six days later. Inspection and inquiry made.
181	27th January, 8 P.M.	Jotejanaki Khas mine, Toposi P. O., Bengal.	Banerjee Santan.	Jangoo Bauri, (*m.*), 38, *Sirdar.*	Coal.	Deceased was not given sufficient warning and he failed to take proper shelter during the firing of a shot in a gallery. He was about 60 feet from the shot when it exploded and he was struck by projected pieces of coal, receiving injuries which proved fatal about 40 hours later. Inspection and inquiry made.

182	2nd February, 11-30 A.M.	Seebpur mine, Charanpur P. O., Bengal.	Katras Jherriah Coal Co., Ltd.	Ram Lal Koiri, (*m.*), 28, *Coal-cutter.*	Coal.	While a shot was being fired in a dopillaring area, a number of miners withdrew to a place of safety. Later they heard what they took to be the sound of the shot and returned to the place, but as deceased reached a point 20 feet from it the shot exploded, and he was fatally injured by a piece of coal projected by the charge. Inspection and inquiry made.
183	7th February, 10 A.M.	Baladurga mine, Sydapuram P. O., Madras.	D. N. Reddy & V. S. Chetty.	Turak Narisigadu, (*m.*), 25, *Driller.*	Mica .	While two drillers were boring a shot hole in an underground gallery, some unexploded gelignite from a previous shot was pierced and exploded. Deceased sustained serious injuries to which he succumbed three days later, and his companion sustained serious injuries. Inspection and inquiry made.
184	8th February, 5 A.M.	Nandi mine, Charanpur P. O., Bengal.	Mondal Brothers .	Badan Majhi, (*m.*), 30, *Coal-cutter.*	Coal .	Deceased was sleeping in a gallery in which blasting was being done 70 feet away. He was struck by a projected piece of coal and sustained fatal injuries. If the shot-firer had given proper warning the accident would have been avoided. Inspection and inquiry made.
185	21st April, 11-30 A.M.	Domarkhar mine, Sasaram P. O., Bihar.	Stone Suppliers, Ltd.	Tulsi Ram, (*m.*), 25, *Mate.*	Lime-stone.	Deceased was struck and instantly killed by a piece of rock, which was projected a distance of 200 feet during blasting operations in an open working. Inspection and inquiry made.
186	3rd May, 6 P.M.	Setwa mine, Kodarma P. O., Bihar.	S. K. Sahana & Sons.	Khanu Khan, (*m.*). 30, *Driller.*	Mica .	While three drillers were engaged in drilling a hole in a tunnel, a misfired charge of explosive was struck and exploded. Deceased sustained serious injuries to which he succumbed one day later, and his companions sustained serious injuries. Inspection and inquiry made.
187	5th June, 1-30 P.M.	Khewra mine, Khewra P. O., Punjab.	Government of India.	Mohammad, (*m.*), 55, *Miner.*	Rock salt.	During blasting operations deceased was killed by a projected mass of rock salt. The shot-firer failed to give proper warning. Inspection and inquiry made.
188	12th June, 11-30 A.M.	Bhangia Gursote mine, Japla P. O., Bihar.	Sone Valley Portland Cement Co., Ltd.	G. C. Bhattacherjee, (*m.*), 32, *Quarry-Assistant.*	Lime-stone.	During blasting operations, deceased failed to take proper shelter, and was struck by a piece of rock which was projected a distance of nearly 300 feet. He sustained injuries to which he succumbed two days later. Inspection and inquiry made.

APPENDIX II—*contd.*

Fatal Accidents during the year 1939—*contd.*

Serial Number.	Date and hour of accident.	Name and situation of mine.	Name of owner.	Name, sex, age and occupation of person killed.	Name of mineral worked.	Cause of accident and remarks.
			BY EXPLOSIVES—*concld.*			
189	23rd June, 3-30 P.M.	Kolhia mine, Junnordeo P. O., Central Provinces.	Rai Bahadur Seth Gowardhandas.	Tulsi Gond, (*m.*), 22, *Coal-cutter.*	Coal .	Deceased entered his working place where a shot had hung fire and as he approached the place the shot exploded and he was fatally injured. Inspection and inquiry made.
190	28th July, 8-30 P.M.	Ekra Khas mine, Bansjora P. O., Bihar.	Maharaja S. C. Nandy.	Mangru Meah, (*m.*), 45, *Shot-firer.*	Coal .	Deceased was drying loose gunpowder in an earthen pot over a fire when it became ignited. He sustained serious burns and died of shock 3 days later. The wife of deceased, who was sitting by his side was also burnt seriously. Inspection and inquiry made.
191	25th August, 10-30 A.M.	West Madhabpur mine, Ondal P. O., Bengal.	Chandanmull Indrakumar.	Nahut Chamar, (*m.*), 35, *Shot-firer.*	Coal .	Two persons were severely burnt by an accidental ignition of gunpowder one of whom succumbed to his injuries. If the Indian Coal Mines Regulation 98 had been observed the accident would have been avoided. Inspection and inquiry made.
192	8th September, 6 A.M.	New Ondal mine, Ondal P. O., Bengal.	Ondal Coal Co., Ltd.	Seikh Monsuf, (*m.*), 30, *Shot-firer.*	Coal .	Deceased set fire to a small quantity of loose gunpowder to test if it was damp, when a spark ignited some cartridges of gunpowder in a canister which he had left open. He sustained extensive burns which proved fatal 56 hours later. Inspection and inquiry made.
193	18th September, 11 A.M.	Jharia Khas (Angarpathra) mine, Sijua P. O., Bihar.	Trigunait Brothers.	Birua Bhuiya, (*m.*), 3, *Nil* Chedi Singh, (*m.*), 35, *Coal-cutter.*	Coal .	On his way to a travelling incline a miner stopped to drink water and while doing so he suspended a locked canister containing 5 lbs. of gunpowder on a vertical post outside his dhowrah. The canister fell to the ground and the gunpowder was ignited by an open fire. A child was fatally burned and two miners were severely burned. One subsequently died. Inspection and inquiry made.

194	1st December, 4-30 P.M.	Manpur Abgilla mine, Gaya P. O., Bihar.	G. W. Powell and A. Ghany.	Sukdeo Kole, (*m.*), 26, *Stone-breaker.*	Stone .	Deceased, disregarding the orders of the manager and a shot-firer, returned to a quarry where a shot had hung fire. Deceased was within 20 feet of place of blasting when the shot exploded. He sustained serious injuries to which he succumbed shortly afterwards. Inspection and inquiry made.
195	28th December, 10 P.M.	Banksimula (Nos. 7 and 8 Pits) mine, Charanpur P. O., Bengal.	Bengal Coal Co., Ltd.	Tribeni Pandey, (*m.*), 30, *Explosive carrier.*	Coal .	An open light was accidentally brought into contact with two gunpowder cartridges and ignited them. Deceased was seriously burnt and died four days later. Inspection and inquiry made.
			HAULAGE—(*40 deaths.*)			
196	3rd January, 3 P.M.	Jamadoba mine, Jealgora P. O., Bihar.	Tata Iron & Steel Co., Ltd.	Dharam Rewani, (*m.*), 40. *Haulage road attendant.*	Coal .	Deceased was run over and killed by a set of loaded tubs which was being raised up a haulage road with a gradient of 1 in 3. It is presumed that he was riding the set without authority when he met with the accident. Inspection and inquiry made.
197	7th January, 4-40 A.M.	Hindusthan Lalpeth mine, Chanda P. O., Central Provinces.	Birla Brothers, Ltd.	Rajam, (*m.*), 25, *Trammer.*	Coal .	A loaded tub ran over the foot of deceased causing slight injuries. Tetanus supervened and he died one week later. Inspection and inquiry made.
198	1st February, 2-30 P.M.	Barkui mine, Parasia P. O., Central Provinces.	Pench Valley Coal Co., Ltd.	Ramcharan Lohar, (*m*), 30, *Fitter.*	Coal .	Two loaded tubs, which were being hauled up an endless haulage road, bumped into two derailed tubs, became detached from the rope, ran back, and derailed at a runaway point. A fitter and his assistant, who were inspecting the runaway points, were struck and seriously injured. The fitter subsequently died. Inspection and inquiry made.
199	4th February, 4 P.M.	Khas Kenduadih mine, Nawagarh P. O., Bihar.	Bhola Nath Mondal.	Latlaha Mahato, (*m.*), 22, *Trammer.*	Coal .	Deceased, contrary to orders, attempted to ride on a set of loaded tubs being raised up a haulage road with a gradient of 1 in 7. His foot slipped and he fell on the tramline and was run over by the set. He sustained serious injuries which proved fatal a few hours later. Inspection and inquiry made.
200	10th February, 8-30 A.M.	Sodepur (Nos. 9 and 10 Pits) mine, Sunderchak P. O., Bengal.	Bengal Coal Co., Ltd.	Karu Mahato, (*m.*), 36, *Trammer.*	Coal .	Deceased attempted to uncouple the last two tubs of a set of seven loaded tubs, which had been set in motion on a slightly inclined haulage road. His head was crushed between the tubs and he was killed instantly. Inspection and inquiry made.

APPENDIX II—*contd.*

Fatal Accidents during the year 1939—*contd.*

Serial Number.	Date and hour of accident.	Name and situation of mine.	Name of owner.	Name, sex, age, and occupation of person killed.	Name of mineral worked.	Cause of accident and remarks.
			HAULAGE—*contd.*			
201	11th February, 7-15 A. M.	Sodepur (Nos. 9 & 10 Pits) mine, Sunderchak P. O., Bengal.	Bengal Coal Co., Ltd.	Suknandan Gararia (*m.*), 28, Ali Mohammad, (*m*), 38, *Haulage line attendants.*	Coal .	While a train of 10 empty tubs was being lowered down a haulage road, dipping at 1 in 5, the loading tub became uncoupled and ran wild. The deceased who were working on the haulage road were struck by the tub and sustained fatal injuries. Inspection and inquiry made.
202	27th February, 11 A. M.	Baragolai mine, Margherita P. O., Assam.	Assam Railways and Trading Co., Ltd.	Sudhai Chamar, (*m.*), 24, *Trammer.*	Coal .	Deceased inadvertently stepped on a moving haulage rope in front of a return wheel, when he was caught, pulled round the wheel, and seriously injured. Pneumonia supervened and he died nine days later. Inspection and inquiry made.
203	24th March, 4-30 P. M.	Isabella mine, Nudkhurkee P. O., Bihar.	Kumar Sarat Kumar Roy.	Latoo Kole, (*m.*) 50, *Coal-cutter.*	Coal .	While a set of 9 empty tubs was being lowered down a haulage road dipping at 1 in 15, one empty tub became uncoupled and ran amain to the end of the haulage road, for a distance of 100 feet. Deceased was struck and sustained serious injuries to which he succumbed 40 days later. Inspection and inquiry made.
204	25th March, 7-30 P. M.	Bhurkunda mine, Bhurkunda P. O., Bihar.	State Railways' Coal Department.	Mohun, (*m.*), 25, *Coal-cutter.*	Coal .	Six tubs which were being loaded at the inbye end of a tramming level dipping 1 in 27, ran away and struck an empty tub that was being pushed by deceased. He was knocked down and runover by the runaway tubs and received fatal injuries. Inspection and inquiry made.
205	21st April, 1 A. M.	Choitodih mine, Katrasgarh P. O., Bihar.	Tata Iron and Steel Co., Ltd.	Sewak Dosad, (*m.*), 32, *Trolleyman.*	Coal .	While a set of four empty tubs was being lowered on a haulage road dipping at 1 in 10, a set of loaded tubs unexpectedly came from another level and collided with the empty tubs. Deceased, who was accompanying the set of empty tubs, sustained injuries to which he succumbed a few hours later. Inspection and inquiry made.

206	1st May, 1 P.M.	Parbelia mine, Dishergarh P. O., Bengal.	Bengal Coal Co., Ltd.	Debendra Bauri, (*m.*), 27, *Haulage set rider.*	Coal	While a train of five loaded tubs was being hauled up a gradient of 1 in 6, the front tub became derailed. Deceased, who was riding on the set, was thrown off and dragged a distance of 70 feet. He received injuries to which he succumbed shortly afterwards. Inspection and inquiry made.
207	3rd May, 10-45 P.M.	Datla mine, Junnordeo P. O., Central Provinces.	Amalgamated Coalfields, Ltd.	Fatya Bhayar, (*m.*), 26, *Loader.*	Coal	Contrary to orders deceased went on a haulage road when he was knocked down by an empty set of tubs which was being lowered. He sustained serious injuries to which he succumbed three months later. Inspection and inquiry made.
208	5th May, 2 P.M.	Dhemo Main mine, Sitarampur P. O., Bengal.	Dhemo Main Coal Co., Ltd.	Etwari, Gope, (*m.*), 28, *Trammer.*	Coal	While deceased was attempting to sprag a set of seven loaded tubs, gravitating down a gradient of 1 in 30, he dropped the sprag on to the track, causing the last tub to derail and overturn. He was struck by the tub and killed instantly. Inspection and inquiry made.
209	12th May, 9 A.M.	Balihari mine, Kusunda P. O., Bihar.	Balihari Colliery Co., Ltd.	Saheb Mahato, (*m.*), 45, *Coal-cutter.*	Coal	While a set of seven empty tubs, which had not been properly coupled to the haulage rope, was being lowered down a haulage road dipping 1 in 10, it got detached and ran amain. Deceased, who was sitting on the haulage road was struck by the runaway tubs and received serious injuries to which he succumbed some 4 hours later. Inspection and inquiry made.
210	9th June, 9-45 A.M.	Jinagora (Section B) mine, Jharia P. O., Bihar.	Jeenagorah (East Bararee) Colliery Co., Ltd.	Chunka Majhi, (*m.*), 33, Hapna Majhi, (*m.*), 43, *Coal-cutters.*	Coal	While a set of five empty side tipping tubs was being lowered down a haulage incline dipping at 1 in 8, two tubs became uncoupled and ran amain. The deceased who were travelling down the haulage road were struck by the runaway tubs and killed instantly. Inspection and inquiry made.
211	24th June, 5 P.M.	Methani mine, Sitarampur P. O., Bengal.	Aldih Coal Co., Ltd.	Jyotish Chandra Chakrabarty, (*m.*), 48, *Overman.*	Coal	While a set of 8 loaded tubs was being hauled up an incline with a variable gradient, a coupling chain failed and seven tubs ran amain. Deceased, who was travelling down the haulage road was struck by one of the tubs and received injuries to which he succumbed four and a half hours later. Inspection and inquiry made.
212	6th July, 1-30 P.M.	Bejdih mine, Sunderchak P. O., Bengal.	Equitable Coal Co., Ltd.	Tinkori Bauri, (*m.*), 26, *Haulage-engine-man.*	Coal	Deceased was knocked down by a loaded tub which had run wild for a distance of 600 feet due to a set of full tubs bumping into it on a haulage road dipping at 1 in 20. He substained serious injuries to which he succumbed 4 hours later. Inspection and inquiry made.

APPENDIX II—*contd.*

Fatal Accidents during the year 1939—*contd.*

Serial Number.	Date and hour of accident.	Name and situation of mine.	Name of owner.	Name, sex, age and occupation of person killed.	Name of mineral worked.	Cause of accident and remarks.
		HAULAGE—*contd.*				
213	18th July, 5-30 A.M.	New Marine mine, Kusunda P. O., Bihar.	New Marine Coal Co., Ltd.	Safi Meah, (*m.*), 50, *Trammer.*	Coal .	While riding without authority on a moving set of loaded tubs, deceased was crushed between the side of a pillar and a tub. He sustained serious injuries and died shortly afterwards. Inspection and inquiry made.
214	19th July, 1-30 A.M.	Bhowra mine, Jealgora P. O., Bihar.	Eastern Coal Co., Ltd.	Somar Mahato, (*m.*), 28, *Trammer.*	Coal .	While lowering a set of 6 empty tubs down a haulage incline dipping at 1 in 6, the set was stopped to allow of a safety block being opened. On resumption of lowering, the two leading tubs became uncoupled and ran amain down the haulage road for a distance of 200 feet. A trammer, who was walking up the haulage road, was struck and fatally injured by the runaway tubs. Inspection and inquiry made.
215	19th July, 8 A.M.	Datla mine, Junnordeo P. O., Central Provinces.	Amalgamated Coalfields, Ltd.	Zilloo Gouli, (*m.*), 28, *Labourer.*	Coal .	A trolley carrying some timber props was attached to the front end of an empty set which was about to be lowered down a haulage road dipping at 1 in 5. After being lowered for some distance the trolley became detached and ran wild, striking and fatally injuring deceased, who was working on the haulage road. If the trolley had been properly coupled to the set the accident would have been avoided. Inspection and inquiry made.
216	20th July, 12-1 A.M.	Dharmaband mine, Katrasgarh P. O., Bihar.	New Tetturya Coal Co., Ltd.	Phulchand Teli, (*m.*), 28, *Trammer.*	Coal .	While three full tubs were being lowered down a self acting incline dipping at 1 in 4, the middle tub derailed on the curve at the bottom. Three trammers were re-railing the tub by means of a lever, when the tub which was coupled to the rope suddenly overturned and fell on two of the trammers killing one instantly and seriously injuring the other. Inspection and inquiry made.

217	1st August, 11-30 A.M.	Deoli mine, Dishergarh P. O., Bihar.	Deoli Coal Co., Ltd.	Gajoo Pasman, (*m.*), 32, *Tub Checker.*	Coal .	While a set of six loaded tubs was being drawn out of a level, the draw-bar of the leading tub became detached, allowing the set to run back. In attempting to get clear, deceased fell down and sustained slight injuries. He contracted pneumonia and died 9 days later. Inspection and inquiry made.
218	4th August, 10 P.M.	Pretoria mine, Charanpur P. O., Bengal.	Seebpur Coal Co., Ltd.	Rajani Bauri, (*m.*), 28, *Trammer.*	Coal .	While deceased with four other trammers was re-railing a loaded tub, which had derailed at a curve off a level haulage road, the tub overturned and fell on him. He sustained serious internal injuries which proved fatal 10 days later. Inspection and inquiry made.
219	15th August, 10 A.M.	Dhori mine, Bokaro P. O., Bihar.	Bokaro and Ramgur, Ltd.	Guja Teli, (*m.*), 24, *Labourer.*	Coal .	While a set of thirteen empty tubs was being lowered down a road dipping at 1 in 7 into a tramming level, the first two tubs got derailed at the junction of the tramming level, and the main haulage road. Deceased, who was standing near the junction, was struck by the derailed tubs and he received serious injuries which proved fatal 8 hours later. Inspection and inquiry made.
220	16th August, 10 A.M.	Kustore mine, Kusunda P. O., Bihar.	Raneegunge Coal Association, Ltd.	Nazir Meah, (*m.*), 18, *Door Attendant.*	Coal .	While operating a ventilation door on a haulage road, a door attendant was caught and seriously injured by a descending set of seven mine cars. He succumbed to his injuries three days later. Inspection and inquiry made.
221	23rd August, 10 P.M.	West Gopalichuck mine, Kusunda P. O., Bihar.	Central Kurkend Coal Co., Ltd.	Sukar Meah, (*m.*), 32, *Loader.*	Coal .	While a loader was pushing an empty tub along a level line he was overtaken by another empty tub which was being pushed. He was crushed between the two empty tubs and fatally injured. Inspection and inquiry made.
222	7th October, 10-45 A.M.	Lodna (Nos. 4 and 5 Pits) mine, Jharia P. O., Bihar.	Lodna Colliery Co. (1920), Ltd.	Kalu Koiri, (*m.*), 35, *Labourer.*	Coal .	While a trolley loaded with props was being lowered on a haulage plane sloping at 1 in 12, it ran wild due to the failure of a sprag. Deceased, who was walking on the haulage road, was struck by one of the props and severely injured. Gangrene supervened and he died 4 days later. Inspection and inquiry made.
223	7th October, 7-30 P.M.	Adjai Second mine, Charanpur P. O., Bengal.	Adjai Collieries, Ltd.	Nepal Bauri, (*m.*), 28, *Labourer.*	Coal .	While a set of eight empty tubs was being lowered down a haulage road with a gradient of 1 in 10, the four front tubs became uncoupled and ran wild. Deceased who was attempting to cross the tram line, was knocked down by the leading tub and killed instantly. Inspection and inquiry made.
224	11th October, 6 A.M.	Bejdih mine, Sunderchuck P. O., Bengal.	Equitable Coal Co., Ltd.	Piru Meah, (*m.*), 49, *Set-rider.*	Coal .	While assisting to re-rail a full tub on a haulage road, 7′×6′6″, deceased sustained injuries and died three and a half months later. Inspection and inquiry made.

APPENDIX II—*contd.*

Fatal Accidents during the year 1939—*contd.*

Serial Number.	Date and hour of accident.	Name and situation of mine.	Name of owner.	Name, sex, age and occupation of person killed.	Name of mineral worked.	Cause of accident and remarks.
			HAULAGE—*concld.*			
225	15th October, 4-30 A.M.	Loyabad mine, Bansjora P.O., Bihar.	Burrakur Coal Co., Ltd.	Mongar Bhuiya, (*m.*), 50, *Trammer.*	Coal .	While two loaded tubs were being hand shunted on a slope of 1 in 50 they got out of control. A trammer who was working at the top of a jig 400 feet away was struck and fatally injured by the runaway tubs. Inspection and inquiry made.
226	24th October, 5-15 A.M.	Jamuria mine, Charanpur P.O., Bengal.	Equitable Coal Co., Ltd.	Benarashi Tanti, (*m.*), 38, *Loader.*	Coal .	While a train of empty tubs was being lowered down a haulage plane, dipping at 1 in 12, the two leading tubs became uncoupled, and ran wild. Deceased, who was sitting at the entrance to a tramming level, was struck and fatally injured. Inspection and inquiry made.
227	24th October, 2-30 P.M.	Raneepur mine, Dishergarh P.O., Bihar.	Equitable Coal Co., Ltd.	Walter Guillot, (*m.*), 45, *Stone-dusting Sirdar.*	Coal .	Deceased sat down on a riding trolley attached to a set of tubs which was being coupled up preparatory to being lowered down a haulage road. The haulage started with a severe jerk on the rope, throwing off deceased against the side, where he was crushed and run over by the following derailed tubs. Deceased was not authorised to ride on sets. Inspection and inquiry made.
228	31st October, 6 A.M.	Kichania mine, Kodarma P.O., Bihar.	Rai Bahadur Lakshmi Narain Sukhani.	Barhan Gorai, (*m.*), 34, *Sirdar.*	Mica .	While a loaded skip was being hauled up a slope of 1 in 8, the D link pin attaching the rope to the tub broke, and the skip ran amain. Deceased, who was standing on the haulage plane, was struck and fatally injured. If a drag had been attached behind the ascending skip the accident would not have occurred. Inspection and inquiry made.
229	5th November, 11-30 A.M.	Banksimula mine, Charanpur P.O., Bengal.	Bengal Coal Co., Ltd.	Gurdeo Singh, (*m.*), 38, *Labourer.*	Coal .	Four loaded tubs became uncoupled and ran amain on a haulage road, dipping at 1 in 10. Deceased, who was passing along the bottom of the road, was struck by the tubs and fatally injured. Inspection and inquiry made.

230	20th November, 9-30 P.M.	Argada mine, Argada P.O., Bihar.	Bengal Nagpur Railway Company, Ltd.	Sohraia, (*m.*), 26, *Trammer.*	Coal .	While deceased was attaching a set of loaded tubs to an endless haulage rope by means of a screw clip, he lost his balance and fell on the track. He was dragged along with the set a distance of about 100 feet and sustained serious injuries to which he succumbed a few hours later. Inspection and inquiry made.
231	11th December, 11-30 A.M.	Bara Golai mine, Margherita P. O., Assam.	The Assam Railways and Trading Company, Ltd.	Lakhu Bauri, (*m.*), 27, *Labourer.*	Coal .	While at work on a level haulage road deceased was knocked down and run over by a set of loaded tubs which was being hauled out of the mine. He received serious injuries which proved fatal a few hours later. Inspection and inquiry made.
232	11th December, 11 A.M.	Sodepur (Nos. 9 and 10 Pits) mine, Sunderchak P. O., Bengal.	Bengal Coal Co., Ltd.	Jugal Dosad, (*m.*), 30, *Trammer.*	Coal .	Deceased was attempting to put a sprag in one of a set of loaded tubs, which was gravitating down a slope of 1 in 15, when the tub overturned killing him instantly. Inspection and inquiry made.
233	22nd December, 2 P.M.	Kargali Mine, Bokaro P. O., Bihar.	State Railways' Coal Department.	Kachra, (*f.*), 35, *Labourer.*	Coal .	A set of four loaded tubs which was being lowered on sprags on a main loading line in a quarry dipping 1 in 50, ran into a branch loading line and struck an empty tub which was being loaded by deceased. The empty tub in turn struck deceased and inflicted fatal injuries. Inspection and enquiry made.
		BY UNDERGROUND MACHINERY—(*2 deaths*).				
234	29th September, 10 A.M.	Bhalgora mine, Jharia P. O., Bihar.	Bhalgora Coal Co., Ltd.	Saheb Ali Meah, (*m.*), 33, *Machine driver.*	Coal .	Deceased was holding the anchor post of a chain coal cutting machine while it was being "sumped" in at the back of a gallery, when the post slipped and struck his head, inflicting fatal injuries. Inspection and inquiry made.
235	23rd November, 8-50 A.M.	Shivrajpur mine, Shivrajpur P. O., Bombay.	Shivrajpur Syndicate, Ltd.	Raghoo Fatchsingh, (*m.*), 40, *Pumpman.*	Manganese Ore.	While deceased was applying grease to the driving chain of a ram-pump, three fingers of his right hand were crushed. He developed Pneumonia and died nearly two months after the accident. Inspection and inquiry made.
		SUNDRIES UNDERGROUND—(*16 deaths*).				
236	4th January, 12 noon.	Sripur (Nos. 1, 2 & 3 Pits) mine, Kalipahari P. O., Bengal.	Lodna Colliery Co. (1920), Ltd.	Hura Ram Kahar, (*m.*), 45, *Labourer.*	Coal .	Deceased, who was suffering from Chronic Hernia, was lifting a lump of coal, 2′×1′6″×1′, when he aggravated his complaint and he died 2 days later. Inspection and inquiry made.

APPENDIX II—*contd.*

Fatal Accidents during the year 1939—*contd.*

Serial Number.	Date and hour of accident.	Name and situation of mine.	Name of owner.	Name, sex, age and occupation of person killed.	Name of mineral worked.	Cause of accident and remarks.
			SUNDRIES UNDERGROUND—*concld.*			
237	6th February, 5 P.M.	Parbelia mine, Nituria P. O., Bihar.	Bengal Coal Co., Ltd.	Baron Dhobi, (*m.*), 34, *Sirdar.*	Coal .	While walking down a haulage dip deceased slipped and fell on his stick, causing internal injuries to the abdomen to which he succumbed about 40 hours later. Inspection and inquiry made.
238	14th February, 4-45 P.M.	Sukli mine, Sukli P. O., Central Provinces.	Rai Bahadur Seth Gowardhandas.	Bhangi, (*m.*), 45, *Miner.*	Manganese Ore.	Deceased accidentally fell into the disused part of a quarry, 60 feet deep, and was killed instantly. Inspection and inquiry made.
239	19th May, 5 A.M.	Bokaro mine, Bokaro P. O., Bihar.	East Indian Railway and Bengal Nagpur Railway.	Puni Ram Gore, (*m.*), 28, *Coal-cutter.*	Coal .	While deceased was striking a "wedge" with a hammer in the face of a quarry the wedge flew out and struck him on the leg. He died from hæmorrhage a few minutes later. Inspection and inquiry made.
240	29th May, 9-15 P.M.	Bhulanbararee mine, Pathardihi P. O., Bihar.	Bhulanbararee Coal Co., Ltd.	Shibapada Ghosal, (*m.*), 39, *Sirdar.*	Coal .	While a prop 25 feet long was being erected in a depillaring area it got out of hand and fell, when it disloged another prop which fell on a "bench" of floor coal. The lid of the second prop flew and struck deceased, who was supervising operations. He was seriously injured and died 24 days later. Inspection and inquiry made.
241	10th June, 5-45 A.M.	Shankargarh mine, Sankargarh P. O., United Provinces.	Govind Ram Sindhi.	Dasrath, (*m.*), 35, *Labourer.*	Stone .	Deceased was removing stones which had been blasted from the face of a quarry, when a large boulder rolled down and struck him. He sustained serious injuries to which he succumbed 36 hours later. Inspection and inquiry made.
242	11th July, 6-30 P.M.	Jhandewala mine, Delhi P. O., Delhi.	Public Works Department.	Udhia, (*m.*), 30, *Stone-cutter.*	Stone .	While levering down a mass of stone in an open excavation from a height of 5 feet, deceased lost his balance and fell down, and immediately afterwards the mass of stone fell and injured him fatally. Inspection and inquiry made.

243	15th July, 11 P. M.	Mosaboni mine, Ghatsila P. O., Bihar.	Indian Copper Corporation, Ltd.	Passang Lama, (*m.*), 28, *Labourer.*	Copper	While deceased was coming down a stope, a mass of stone 6′×6′×3′ 6″ thick, which lay on the foot wall, rolled down and struck him, causing serious injuries which proved fatal 5 days later, Inspection and inquiry made.
244	26th August, 6 A. M.	Bejdih mine, Sunderchak P. O., Bengal.	Equitable Coal Co., Ltd.	Jagadish Turi, (*m.*), 25, *Coal-cutter.*	Coal .	While deceased was carrying a large lump of coal along a bench 3 feet wide, cut in a pillar under extraction, he slipped and fell, sustaining internal injuries which proved fatal two days later. Inspection and inquiry made.
245	26th September, 3-15 P. M.	Bokaro mine, Bokaro P. O., Bihar.	East Indian Railway and Bengal Nagpur Railway.	Mongra Mali, (*m.*), 35, *Coal-cutter.*	Coal .	While working on the top "bench" of a quarry, deceased overbalanced and fell to the second "bench", through a height of about 20 feet. He sustained serious injuries and died half an hour later. Inspection and inquiry made.
246	2nd October, 7 P. M.	Baragolai mine, Margherita P. O., Assam.	Assam Railways and Trading Co., Ltd.	Sherafzal Pathan, (*m.*), 30, *Coal-puller.*	Coal .	While deceased with five other persons was pulling coal and earth from an "opening," sloping at 1 in 2, a large mass of earth rolled down and struck deceased, killing him on the spot. Inspection and inquiry made.
247	26th October, 10-15 A. M.	Shivrajpur mine, Shivrajpur P. O., Bombay.	Shivrajpur Syndicate, Ltd.	Rama Kalu, (*m.*), 40, *Miner.*	Manganese.	Deceased was dressing loose stones in an opencast working by standing on a cradle 35 feet above the ground when a stone 12″×12″×10″ struck one of the ropes supporting the cradle causing it to swing. He lost his balance, fell off the cradle and sustained fatal injuries. Inspection and inquiry made.
248	3rd November, 4-30 P. M.	Khas Joyrampur mine, Jharia P. O., Bihar.	Seth Tarachand Ghanshyamdas.	Prosadi Bhuiya, (*m.*), 28, *Loader.*	Coal .	Deceased was engaged in loading coal from a heap of coal about 8 feet in height in a gallery, when a lump of coal, measuring about 1′6″×1′ 3″× 1′, rolled down from the top of the heap and struck him. He sustained serious injuries and died about two hours later. Inspection and inquiry made.
249	23rd December, 6 P.M.	Methani mine, Sitarampur P. O., Bengal.	Aldih Coal Co., Ltd.	Bhagirath Mahato, (*m.*), 38, Dolu Singh, (*m.*), 31, *Drillers.*	Coal .	In a level gallery, a brattice cloth caught fire from an unknown source. In attempting to escape from the face of the gallery, two drillers were severely burnt and they succumbed to their injuries three days later. Inspection and inquiry made.
250	28th December, 6-45 A.M.	Jamuria (Nos. 7 and 8 Pits) mine, Charanpur P. O., Bengal.	Equitable Coal Co., Ltd.	Mangoo Keyot, (*m.*), 52, *Coal-cutter.*	Coal .	In a depillaring area, deceased was struck and killed instantly by a prop, 11 feet long, which had been loosened during blasting operations and was dislodged by a miner falling heavily against it. Inspection and inquiry made.

APPENDIX II—*contd.*

Fatal Accidents during the year 1939—*contd.*

Serial number.	Date and hour of accident.	Names and situation of mine.	Name of owner.	Name, sex, age and occupation of person killed.	Name of mineral worked.	Cause of accident and remarks.
			BY SURFACE MACHINERY—(*2 deaths.*).			
251	8th January, 9 A.M.	Real Raniganj mine, Raniganj P. O., Bengal.	Real Raniganj Coal Co., Ltd.	Moharaj Tewari (alias Chattar Tewari), (*m.*), 47, *Labourer.*	Coal .	A small electric generator was being driven by a steam engine when the driving pulley on the transmission shaft collapsed and the broken parts were projected in to the air. Deceased, who was working near a pit top 50 feet away, was struck by one of the projected pieces of metal and received serious injuries to which he succumbed shortly afterwards. Inspection and inquiry made.
252	19th April, 1 P.M.	Baragolai mine, Margherita P. O., Assam.	Assam Railways and Trading Co., Ltd.	Nandlal Chetri, (*m.*), 54, *Fan attendant.*	Coal .	Deceased was found dead underneath a belt driving a fan. It is presumed that he climbed on the engine, when he slipped and fell on to the moving belt. He was killed instantly. Inspection and inquiry made.
			ON SURFACE RAILWAYS AND TRAMWAYS BELONGING TO THE MINE—(*11 deaths*).			
253	12th February, 8-30 P.M.	Jamuria (A. and B. Pits) mine, Charanpur P. O., Bengal.	Equitable Coal Co., Ltd.	Jhari Shaw, (*m.*), 40, *Labourer.*	Coal .	While wagons were being shunted on a railway siding deceased attempted to pass between two wagons. He was crushed between the buffers and fatally injured. Inspection and inquiry made.
254	23rd March, 4-15 P.M.	Madhuband mine, Nudkhurkee P. O., Bihar.	Karamchand Thapar and Brothers, Ltd.	Surjidev Pasi, (*m.*), 25, *Labourer.*	Coal .	Deceased was standing on a wall trying to operate the brake of a wagon with his foot when he slipped and fell on the line. He was run over by the wagon and sustained serious injuries to which he succumbed 5 hours later. Inspection and inquiry made.

255	25th May, 5 P.M.	Jamuria mine, Charanpur P. O., Bengal.	Equitable Coal Co., Ld.	Hara Baurin, (*f.*), 16, *Labourer.*	Coal .	Deceased was run over by a moving wagon in a siding and sustained injuries which proved fatal 42 hours later. Inspection and inquiry made.
256	30th May, 5-30 P.M.	Domarkhar mine, Darigaon P. O., Bihar.	Stone Suppliers, Ltd.	Ramoli, (*m.*), 44, *Trammer.*	Lime-stone.	Deceased, with another trammer, was pushing a loaded tub on a surface tram line, when he slipped and his right heel was injured by a wheel of the tub. He died from Septicæmia about 6 weeks later. Inspection and inquiry made.
257	13th June, 3-15 P.M.	New Marine mine, Kusunda P. O., Bihar.	New Marine Coal Co., Ltd.	Pairi Mallan, (*f.*), 50, *Labourer.*	Coal .	While wagons were being hand-shunted on a railway siding, deceased, who was unaware of the shunting operations, took shelter from rain beneath one of the stationary wagons. In attempting to get from beneath the wagon when it was set in motion, she was run over and received serious injuries to which she succumbed some 40 minutes later. Inspection and inquiry made.
258	21st June, 11-45 A.M.	Dongri Buzurg mine, Goberwahi P. O., Central Provinces.	Central Provinces Manganese Ore Co., Ltd.	Tulsi Gowara, (*f.*), 25, *Labourer.*	Manga-nese Ore.	While a loaded tipping tub was being pushed along a tram-line, 12 feet above the ground, the tub accidentally got derailed and fell down to the ground. Deceased was struck by the tub and killed instantly. Inspection and inquiry made.
259	15th August, 9-30 P.M.	Chandametta mine, Parasia P. O., Central Provinces.	Pench Valley Coal Co., Ltd.	Amarchand Mehra, (*m.*), 30, *Trammer.*	Coal .	While deceased was assisting to hand-shunt a loaded wagon under a screening plant, he accidentally slipped and was run over, sustaining injuries which proved fatal shortly after. Inspection and inquiry made.
260	13th October, 4 A.M.	Dishergarh West mine, Dishergarh P. O., Bengal.	Equitable Coal Co., Ltd.	Mati Mejhan, (*f.*), 50, *Labourer.*	Coal .	While deceased was cleaning up fallen coal near a loaded wagon standing under a screening plant an empty wagon bumped into it. Deceased was knocked down and sustained injuries which proved fatal five hours later. Inspection and inquiry made.
261	14th December, 7-55 P. M.	Ghorawari mine, Junnordeo P. O., Central Provinces.	Hiradagarh Collieries, Ltd.	Kaju Mehra, (*m.*) ,23, *Trammer.*	Coal .	While deceased was pushing a loaded tub on a gradient of 1 in 80 on to a tippler, his foot was caught in the rails of a crossing. He was run over by a following tub before he could release himself and sustained injuries which proved fatal shortly after. Inspection and inquiry made.
262	20th December. 7-30 P. M.	Dhemo Main mine, Sitarampur P. O, Bengal.	Dhemo Main Coal Co., Ltd.	Sona Bauri, (*m.*), 28, *Trammer.*	Coal .	While pulling a loaded tub along a level tramming road a wheel of the tub passed over his left foot. Tetanus supervened and he died nine days later. Inspection and inquiry made.

APPENDIX II—*contd.*

Fatal Accidents during the year 1939—*contd.*

Serial Number.	Date and hour of accident.	Name and situation of mine.	Name of owner.	Name, sex, age and occupation of person killed.	Name of mineral worked.	Cause of accident and remarks.
			ON SURFACE RAILWAYS AND TRAMWAYS BELONGING TO THE MINE—*concld.*			
263	27th December, 4 P. M.	Ramnagore mine, Kulti P. O., Bengal.	Bengal Iron Co., Ltd. (In voluntary liquidation).	Sashi Muchi (*m.*), 25, *Surface trolleyman.*	Coal .	Deceased was attempting to couple a locomotive to a set of loaded tubs when his head was crushed. He was killed almost instantly. Inspection and inquiry made.
			By electricity—(*1 death*).			
264	13th September, 7 P. M.	Amlabad mine, Jealgora P. O., Bihar.	Eastern Coal Co., Ltd.	Sricharan Rajwar, (*m.*), 26, *Trammer.*	Coal .	Deceased was attempting to raise a derailed tub on to the rails. He had one foot on the (tugger) haulage rope attached to the tub and his hands on the latter when he cried out and staggered, as a result of an electric shock which proved fatal. The haulage attendant who went to work the tugger also received a shock while closing the switch. The system was 550 volts, 3 phase, A. C. with the neutral point insulated. Inspection and inquiry made.
			Miscellaneous on surface—(*2 deaths*).			
265	31st March, 4-45 P. M.	Sendra mine, Bansjora P. O., Bihar.	Sendra Coal Co., Ltd.	Baneswar Bauri, (*m.*), 60, *Earth-cutter.*	Coal .	Deceased was engaged in cutting earth from the side of an old embankment about 6 feet high, when a mass of side fell and buried him. He was seriously injured and died four hours later. Inspection and inquiry made.
266	27th December, 4. P. M.	Lodna mine, Jharia P. O., Bihar.	New Standard Coal Co., Ltd.	Kusum Harain, (*f.*), 40, *Labourer.*	Coal .	Deceased assisted by another woman was carrying a prop 15 feet long and 6″ diameter when she got tired and tried to adjust the prop on her head. The prop slipped and fell on her right shoulder, causing a spinal injury which proved fatal 58 hours later. Inspection and inquiry made.

Serial number.	Date and hour of accident.	Name and situation of mine.	Name of owner.	Name, sex, age and occupation of person killed.	Name of mineral worked.	Reason for exclusion.	Cause of accident and remarks.
			FATAL ACCIDENTS NOT INCLUDED IN THE STATISTICS—(*18 deaths*).				
1	22nd March, 12 Noon.	Dishergarh mine, Dishergarh P. O., Bengal.	Equitable Coal Co., Ltd.	Nani Mejhan, (*f.*), 65, Not employed.	Coal .	Not a mining accident.	While deceased was digging earth in a small excavation on the side of a hillock, she was partially buried by a mass of earth which fell from the side and fatally injured. Inspection and inquiry made.
2	22nd March, 10-30 P.M.	South Panara mine, Junnordeo P. O., Central Provinces.	Budhoolal Jagannath.	Damroo Mehra, (*m.*), 55, *Labourer.*	Coal .	Not a mining accident.	Deceased with his family was sleeping in a dwelling under construction, when a partition wall suddenly collapsed. Deceased was buried by the debris and received fatal injuries. Inspection and inquiry made.
3	16th April, 1-30 P.M.	Shampore mine, Nirshachati P. O., Bihar.	Shampore Coal Co., Ltd.	Mangroo Bauri, (*m.*), 45, *Pump-man.*	Coal .	Not a mining accident.	Deceased was found dead in a dip gallery containing 1½ feet of water. Inspection and inquiry made.
4	30th April, 9-15 A.M.	Mudidih mine, Sijua P. O., Bihar.	Burrakur Coal Co., Ltd.	Fateh Khan, (*m.*), 48, *Depot Chaprasi.*	Coal .	Not a mining accident.	While wagons were being shunted on a colliery siding, deceased, who was either sitting under the shade of the last wagon or attempting to cross the line, was caught between one of the buffers of the last wagon and the end buffer of the siding. He received serious internal injuries and died 1½ hours later. Inspection and inquiry made.
5	5th May, 1-45 P.M.	Kajora mine, Kajoragram P. O., Bengal.	Roy Dutta & Co.	Jugal Ankuria, (*m.*), 45; Chattu Majhi, (*m.*), 20; Raghu Muchi, (*m.*), 26; *Labourers.*	Coal .	Not a mining accident.	During a storm four persons took shelter behind the supporting walls of an overhead tank, when the walls collapsed. The deceased were killed instantly and the other person received serious injuries. Inspection and inquiry made.

APPENDIX II—*contd.*

Fatal Accident during the year 1939—*concld.*

Serial number.	Date and hour of accident.	Name and situation of mine.	Name of owner.	Name, sex, age and occupation of person killed.	Name of mineral worked.	Reason of exclusion.	Cause of accident and remarks.
			FATAL ACCIDENTS NOT INCLUDED IN THE STATISTICS—*concld.*				
6	10th June, 6-45 P.M.	Parbelia Transmission line, Sitarampur P. O., Bengal.	Dishergarh Power Supply Co., Ltd.	Ghuran Dusad, (*m.*), *Coal cutter* (at Parbelia colliery).	..	Not a mining accident.	Deceased, when apparently not in his senses, climbed up a tower and came in contact with a live electric conductor. He received a severe electric shock and burns on his neck and foot. He fell to the ground and was found dead. The system was 3-phase 11,000 volts with the neutral point earthed. Inspection and inquiry made.
7	8th July, 7-30 A.M.	Ramkanali mine, Katrasgarh P.O., Bihar.	B. K. Roy .	Gopinath Chatterjee, (*m.*), 75, *A mine manager.*	Coal .	Not a mining accident.	While crossing a tramline bridge over a river, deceased fell to the bed of the river through a height of about 20 feet and sustained fatal injuries. Inspection and inquiry made.
8	14th July, 6-30 A.M.	Sendra-Bansjora mine, Bansjora P. O., Bihar.	Sendra-Bansjora Colliery Co., Ltd.	Dharaju Pasin, (*f.*), 35, *Nil.*	Coal .	Not a mining accident.	Deceased was carrying fire in a small receptacle from her dwelling in which a tin containing loose gunpowder had been placed. When she fell down the gunpowder was ignited and deceased sustained burns to which she succumbed five days later. Inspection and inquiry made.
9	19th September, 7-30 P.M.	West Ghusick mine, Kalipahari P. O., Bengal.	H. N. Singh .	Jugli Marwarin, (*f.*), 30, *Not an employee.*	Coal .	Not a mining accident.	During a fit of insanity, deceased threw herself down a water-logged shaft and was fatally injured. Inspection and inquiry made.
10	7th October, 9 P.M.	New Sudamdih mine, Pathardihi P. O., Bihar.	New Sudamdih Collieries, Ltd.	Nadulal Kahar, (*m.*), 45, *Railway employee.*	Coal .	Not employed.	A railway employee in a drunken condition passed through a fence and rolled down the slope of an incline cutting. He was injured by a set of full tubs which was drawn up the incline and died 30 minutes later. Inspection and inquiry made.

11	11th October, 10-30 A.M.	Poidih mine, Sunderchak P. O., Bengal.	Bengal Coal Co., Ltd.	Koka Basra (Majhi), (*m.*), 30, *Coal-cutter.*	Coal .	Not a mining accident.	While bathing in a tank, which was regularly used for bathing purposes, deceased had an epileptic fit and was drowned. Inspection and inquiry made.
12	26th November, 11-30 A.M.	Madhuband mine, Nudkhurkee P.O., Bihar.	Karamchand Thapar & Bros., Ltd.	Ram Das Beldar, (*m.*), 18, *Labourer.*	Coal .	Not a mining accident.	Deceased was found drowned in shallow water near the entrance to an abandoned incline. He was subject to epileptic fits and it is presumed that during a fit he fell with his head in the water and was suffocated. Inspection and inquiry made.
13	9th December, 9-30 A.M.	Gua Mine, Gua P. O., Bihar.	Indian Iron & Steel Co., Ltd.	Bagon Ho, (*m.*), 32, *Sawyer.*	Iron ore	Not a mining accident.	Deceased was sawing a tree at the foot of a hill when a mass of stone about 1 foot in diameter rolled down the side and struck him, causing serious injuries which proved fatal a few hours later. It was presumed that the stone was dislodged by some goats which were seen grazing on the slope of the hill. Inspection and enquiry made.
14	20th December, 3 A.M.	Ghorawari mine, Ghorawari P. O., Central Provinces.	Hirdagarh Collieries Ltd.	Unknown, (*m.*), 22, *nil.*	Coal .	Not employed.	Deceased was run over by a locomotive on a surface tramline and sustained fatal injuries. Inspection and inquiry made.
15	22nd December, About 3 P.M.	Chasnalla mine, Pathardih P. O., Bihar.	Indian Iron & Steel Co., Ltd.	Raghu Mondal, (*m.*), 60, *Not employed.*	Coal .	Not employed.	While deceased was undercutting coal in a disused quarry, a mass of coal, about 8′×6′×1′6″ fell on him from the side and killed him instantly. Inspection and inquiry made.
16	24th December, 10 P.M.	Samla Mandarboni mine, Pandaveswar P. O., Bengal.	Samla Mandarboni Colliery Co.	Jivan Khoyra, (*m.*), 35, *Coal-cutter.*	Coal .	Not a mining accident.	Deceased was sleeping in his hut when his clothing was set on fire by a lamp and he was severely burnt. Pneumonia supervened from which he died 16 days later. Inspection and inquiry made.

APPEN

Table

Statement of fatal and serious accidents in and about Mines

Province.	District and Mineral field.	FATAL						
		Number of separate fatal accidents.	Number of deaths.					
			Under-ground.	Open workings.		Surface.		
			Males.	Males.	Females.	Males.	Females.	Total.
Assam	Lakhimpur-Makum Coalfield.	9	8	..	..	1	..	9
Bengal (and part of Bihar)	Raniganj Coalfield	94	97	..	..	4	2	103
Bihar	Jharia Coalfield	85	84	1	1	5	2	93
	Bokaro ,,	8	4	3	1	..	..	8
	Karanpura ,,	1	..	1	..	..	..	1
	Giridih ,,	7	8	..	..	..	..	8
	Jainty ,,	..	..	..	..	..	..	..
	Palamau ,,	1	1	..	..	..	..	1
Central Provinces	Chanda	3	3	..	..	..	..	3
	Chhindwara-Pench Valley Coalfield.	15	14	..	..	2	..	16
	Yeotmal	1	1	..	..	..	..	1
Orissa	Sambalpur—Hingir Rampur Coalfield.	..	..	..	..	..	..	..
Punjab	Salt Range Coalfield	5	6	..	..	..	..	6
	Total (Coal)	229	226	5	2	12	4	249

DIX II—*contd.*

No. 2

regulated by the Indian Mines Act, during the year 1939.

ACCIDENTS.				SERIOUS ACCIDENTS.										
DEATH RATE PER 1,000 PERSONS EMPLOYED.				Number of separate serious accidents.	NUMBER OF PERSONS SERIOUSLY INJURED.						SERIOUS INJURY RATE PER 1,000 PERSONS EMPLOYED.			
					Under-ground.	Open workings.		Surface.						
Underground.	Open workings.	Surface.	Underground, open workings and surface.		Males.	Males.	Females.	Males.	Females.	Total.	Underground.	Open workings.	Surface.	Underground, open workings and surface.
AL.														
5·85	..	1·78	4·51	103	94	..	..	9	..	103	68·79	..	15·99	51·58
2·11	..	0·28	1·50	353	297	..	..	57	7	361	6·45	..	2·97	5·26
1·53	0·49	2·39	1·05	462	361	5	..	90	12	468	6·57	1·22	3·48	5·30
1·26	0·57	..	0·63	52	14	22	7	8	1	52	4·42	4·14	3·68	4·12
..	0·67	..	0·25	9	4	..	..	5	..	9	2·72	..	4·74	2·24
1·63	..	..	1·26	101	93	..	..	7	1	101	18·93	..	5·55	15·85
..	..	..	..	1	..	..	..	1	..	1	..	..	3·65	1·42
10·00	..	..	5·68	..	..	..	..	..	..	..	..	..	..	..
1·41	..	..	1·06	12	12	..	..	..	..	12	5·65	..	..	4·23
1·98	..	0·59	1·39	59	40	2	1	15	2	60	5·65	2·94	5·01	5·22
2·97	..	..	2·21	..	..	..	..	..	..	..	..	..	..	..
..	..	..	..	2	2	..	..	..	..	2	6·78	..	..	3·47
3·43	..	..	2·11	7	7	..	..	1	..	8	4·00	..	0·04	2·81
1·81	0·47	0·26	1·23	1,161	924	29	8	193	23	1,177	7·41	1·82	3·46	5·83

Table

Statement of fatal and serious accidents in and about Mines

Province.	District and Mineral field.	FATAL						
		Number of separate fatal accidents.	Number of deaths.					
			Underground.	Open workings.		Surface.		
			Males.	Males.	Females.	Males.	Females.	Total.
								IRON
Bihar	Singhbhum	1	..	..	1	..	..	1
								MAN
Bombay	Panch Mahals	3	2	1	..	..	..	3
Central Provinces	Balaghat	3	1	2	..	..	..	3
	Bhandara	1	..	..	..	..	1	1
	Nagpur	..	..	..	..	..	..	..
	Total (Manganese Ore)	7	3	3	..	..	1	7
								CHROMITE
Baluchistan	Upper Zhob	2	..	2	..	..	..	2
								COPPER
Bihar	Singhbum	1	1	..	..	..	..	1
								MI
Bihar	Gaya	..	..	..	..	..	..	..
	Hazaribagh	10	8	2	..	..	..	10
	Monghyr	1	..	1	..	..	..	1
Madras	Nellore	1	1	..	..	..	..	1
Rajputana	Ajmer-Merwara	1	1	..	..	..	..	1
	Total (Mica)	13	10	3	..	..	..	13

DIX II—*contd.*

No. 2—*contd.*

regulated by the Indian Mines Act, during the year 1939—*contd.*

ACCIDENTS.				SERIOUS ACCIDENTS.										
DEATH RATE PER 1,000 PERSONS EMPLOYED.				Number of separate serious accidents.	NUMBER OF PERSONS SERIOUSLY INJURED.						SERIOUS INJURY RATE PER 1,000 PERSONS EMPLOYED.			
					Underground.	Open workings.		Surface.						
Underground.	Open workings.	Surface.	Underground, open workings and surface.		Males.	Males.	Females.	Males.	Females.	Total.	Underground.	Open workings.	Surface.	Underground, open workings and surface.
ORE.														
..	0·14	..	0·11	21	..	4	2	12	3	21	..	0·83	9·12	2·38
GANESE ORE.														
9·76	1·03	..	1·71	10	7	2	..	3	..	12	34·15	2·07	5·14	6·83
1·76	0·25	..	0·27	20	4	4	2	5	5	20	7·04	0·75	4·10	1·81
..	..	1·65	0·23	18	..	2	1	7	8	18	..	0·80	24·75	4·08
..	..	..	..	4	1	..	1	2	..	4	5·49	0·18	2·93	0·63
2·96	0·14	0·21	0·25	52	12	8	4	17	13	54	11·85	0·55	6·36	1·97
ORE.														
..	17·24	..	7·58	1	..	1	..	..	..	1	..	8·62	..	3·79
ORE.														
0·54	..	..	0·32	67	60	..	..	11	..	71	32·57	..	8·85	23·01
CA.														
..	..	..	..	2	3	..	..	..	..	3	1·34	..	..	0·84
0·65	0·60	..	0·53	20	18	4	..	3	..	25	1·46	1·21	0·93	1·33
..	4·08	..	0·78	..	..	..	..	..	..	..	..	..	..	..
0·45	..	..	0·15	1	2	..	..	..	..	2	0·90	..	..	0·30
4·78	..	..	0·79	..	..	..	..	..	..	..	..	..	..	..
0·56	0·38	..	0·40	23	23	4	..	3	..	30	1·29	0·51	0·47	0·93

APPEN

Table

Statement of fatal and serious accidents in and about Mines

Province.	District and Mineral field.	FATAL						
		Number of separate fatal accidents.	Number of deaths.					
			Underground.	Open workings.		Surface.		
			Males.	Males.	Females.	Males.	Females.	Total.
								SA
Punjab	Jhelum	2	2	..	..	..	..	2
	Mianwali	..	..	..	..	..	..	..
	Shahpur	..	..	..	..	..	..	..
	Total (Salt)	2	2	..	..	..	..	2
								MAG
Madras	Salem	..	..	..	..	..	..	..
								SLA
Punjab	Kangra	1	..	1	..	..	..	1
								LIME
Bihar	Shahabad	3	..	2	..	1	..	3
Central Provinces	Jubbulpore	..	..	..	..	..	..	..
Madras	Coimbatore	..	..	..	..	..	..	..
Punjab	Attock	1	..	1	..	..	..	1
	Mianwali	1	..	1	..	..	..	1
	Rawalpindi	..	..	..	..	..	..	..
	Total (Limestone)	5	..	4	..	1	..	5

DIX II—*contd.*

No. 2—*contd.*

regulated by the Indian Mines Act, during the year 1939—*contd.*

ACCIDENTS.				SERIOUS ACCIDENTS.										
DEATH RATE PER 1,000 PERSONS EMPLOYED.				Number of separate serious accidents.	NUMBER OF PERSONS SERIOUSLY INJURED.						SERIOUS INJURY RATE PER 1,000 PERSONS EMPLOYED.			
					Underground.	Open workings.		Surface.						
Underground.	Open workings.	Surface.	Underground, open workings and surface.		Males.	Males.	Females.	Males.	Females.	Total.	Underground.	Open workings.	Surface.	Underground, open workings and surface.
LT.														
3·05	..	..	2·02	11	8	..	..	3	..	11	12·21	..	9·40	11·09
..	..	..	..	4	2	..	..	2	..	4	17·24	..	25·97	20·73
..	..	..	..	2	2	..	..	..	..	2	13·79	..	..	9·66
2·18	..	..	1·44	17	12	..	..	5	..	17	13·10	..	10·92	12·21
NESITE.														
..	..	..	..	1	..	..	..	1	..	1	..	..	5·29	0·36
TE.														
..	2·52	..	2·47	1	..	1	..	..	..	1	..	2·52	..	2·47
STONE														
..	0·88	1·91	1·07	4	..	1	..	3	..	4	..	0·44	5·74	1·43
..	..	..	..	8	..	5	3	..	..	8	..	3·16	..	3·09
..	..	..	..	1	..	..	1	..	..	1	..	2·06	..	2·04
..	2·24	..	2·24	7	..	7	..	..	..	7	..	15·66	..	15·66
..	4·67	..	4·67	..	..	..	..	..	..	..	..	..	..	..
..	..	..	..	1	..	1	..	..	..	1	..	33·33	..	32·26
..	0·61	1·40	0·69	21	..	14	4	3	..	21	..	2·76	4·20	2·90

APPEN

Table

Statement of fatal and serious accidents in and about Mines

FATAL

Province.	District and Mineral field.	Number of separate fatal accidents.	Number of deaths.					
			Underground.	Open workings.		Surface.		
			Males.	Males.	Females.	Males.	Females.	Total.
Bihar	Gaya	1	..	1	..	..	..	1
	Santal Parganas	..	..	..	..	..	..	..
	Singhbhum	..	..	..	..	..	..	..
Bombay	Kaira	1	..	1	..	..	..	1
Delhi	Delhi	1	..	1	..	..	..	1
Madras	Chingleput	..	..	..	..	..	..	..
	Guntur	..	..	..	..	..	..	..
United Provinces	Allahabad	1	..	1	..	..	..	1
	Total (Stone)	4	..	4	..	..	..	4
Bengal	Burdwan	1	..	1	..	..	..	1
Bihar	Singhbhum	..	..	..	..	..	..	..
Bengal	Burdwan	..	..	..	..	..	..	..
	Grand Total (All Minerals)	266	242	23	3	13	5	286

DIX II—*contd.*

No. 2—*concld.*

regulated by the Indian Mines Act, during the year 1939—*concld.*

ACCIDENTS.				SERIOUS ACCIDENTS.										
DEATH RATE PER 1,000 PERSONS EMPLOYED.				Number of separate serious accidents.	NUMBER OF PERSONS SERIOUSLY INJURED.						SERIOUS INJURY RATE PER 1,000 PERSONS EMPLOYED.			
					Under-ground.	Open workings.		Surface.						
Underground.	Open workings.	Surface.	Underground, open workings and surface.		Males.	Males.	Females.	Males.	Females.	Total.	Underground.	Open workings.	Surface.	Underground, open workings and surface.
ONE.														
..	1·39	..	1·39	1	..	..	1	..	..	1	..	1·39	..	1·39
..	..	..	..	1	..	1	..	..	..	1	..	0·60	..	0·34
..	..	..	..	1	..	1	..	..	..	1	..	0·75	..	0·71
..	58·82	..	22·22	..	..	..	..	..	..	..	..	..	..	..
..	0·83	..	0·83	..	..	..	..	..	..	..	..	..	..	..
..	..	..	..	7	..	4	1	2	..	7	..	4·60	15·15	5·75
..	..	..	..	1	..	1	..	..	..	1	..	6·06	..	6·06
..	1·07	..	1·05	1	..	2	..	..	..	2	..	2·14	..	2·11
..	0·36	..	0·29	12	..	9	2	2	..	13	..	0·99	0·75	0·95
CLAY.														
..	12·35	..	7·25	..	..	..	..	..	..	..	..	..	..	..
..	..	..	..	2	..	1	..	1	..	2	..	0·99	1·69	1·25
AY.														
..	..	..	..	1	..	1	..	..	..	1	..	8·33	..	8·06
1·65	0·84	0·22	0·94	1,380	1,035	72	20	244	39	1,410	7·05	1·20	3·46	4·62

APPENDIX II—*concld.*

Table No. 3.

Statement of fatal accidents in Mines regulated by the Indian Mines Act, during the year 1939, classified according to cause of accident.

Mineral worked.	Number of separate accidents.	Number of persons killed.											Death rate per 1,000 persons employed.			
		Falls of roof.	Falls of sides.	In shafts.	Suffocation by gases.	By explosives.	By irruption of water.	Haulage.	Miscellaneous underground.	Electricity.	Surface.	Total deaths.	Underground.	Open workings.	Surface.	Underground, open workings and surface.
Coal . . .	229	91	71	10	1	11	..	39	12	1	13	249	1·81	0·47	0·26	1·23
Iron Ore . .	1	..	1	..	..	..	..	..	..	..	..	1	..	0·14	..	0·11
Manganese Ore .	7	2	1	..	..	..	..	..	3	..	1	7	2·96	0·14	0·21	0·25
Chromite Ore .	2	..	2	..	..	..	..	..	..	..	..	2	..	17·24	..	7·58
Copper Ore . .	1	..	..	..	..	..	..	..	1	..	..	1	0·54	..	..	0·32
Mica . . .	13	1	5	4	..	2	..	1	..	..	..	13	0·56	0·38	..	0·40
Salt . . .	2	1	..	..	..	1	..	..	..	..	..	2	2·18	..	..	1·44
Slate . . .	1	..	1	..	..	..	..	..	..	..	..	1	..	2·52	..	2·47
Limestone . .	5	..	2	..	..	2	..	..	..	..	1	5	..	0·61	1·40	0·69
Stone . . .	4	..	1	..	..	1	..	..	2	..	..	4	..	0·36	..	0·29
Fireclay . .	1	..	1	..	..	..	..	..	..	..	..	1	..	12·35	..	7·25
Total for 1939 .	266	95	85	14	1	17	..	40	18	1	15	286	1·65	0·34	0·22	0·94
Total for previous year.	248	104	62	15	..	10	2	40	26	..	24	283	1·66	0·29	0·32	0·92
Difference .	+18	—9	+23	—1	+1	+7	—2	..	—8	+1	—9	+3	—0·01	+0·05	—0·10	+0·02

APPENDIX III.

Statement of prosecutions under the IndianMines Act, during the year 1939.

Province.	District.	Number of prose-cutions.	Number of persons prose-cuted.	Number of persons con-victed.	Number of Regulations, Bye-laws and Rules and Sections of the Act con-travened.	Remarks.
Assam	Margherita	1	1	1	Regulations 116 A(*a*), 140, 146 of the Indian Coal Mines Regulations, 1926 and Bye-law 16 made under Section 32 of the Indian Mines Act, 1923.	
Bengal	Burdwan	1	1	...	Regulation 137(2) of the Indian Coal Mines Regu-lations, 1926 and Rule 18 of the rules made by the Bengal Government under Section 30 of the Indian Mines Act, 1923.	The case was withdrawn.
	Do.	1	4	4	Order under Section 19 (1-A) of the Indian Mines Act, 1923 and Regulations 144 and 149 of the Indian Coal Mines Regulations, 1926 and Bye-law 95 made under Section 32 of the Indian Mines Act, 1923.	
	Do.	1	1	1	Section 28 of the Indian Mines Act, 1923, read with Rule 9 of the rules made by the Bengal Government under Sec-tion 30 of the Indian Mines Act, 1923, Regu-lations 69(2) and 70(2) of the Indian Coal Mines Regulations, 1926.	
	Do.	1	2	2	Section 15 of the Indian Mines Act, 1923, read with Regulations 23 and 24 of the Indian Coal Mines Regulations, 1926.	
	Do.	1	7	6	Regulations 74, 87(*c*) and 137(2) of the Indian Coal Mines Regulations, 1926.	One of the accused acquitted.
	Do.	1	2	2	Regulation 38 of the Indian Coal Mines Regu-lations, 1926.	
	Bankura	1	1	1	Section 15 of the Indian Mines Act, 1923, read with Regulation 23 of of the Indian Coal Mines Regulations, 1926.	

APPENDIX III—*contd.*

Statement of prosecutions under the Indian Mines Act, during the year 1939—*contd.*

Province.	District.	Number of prosecutions.	Number of persons prosecuted.	Number of persons convicted.	Number of Regulations, Bye-laws and Rules and Sections of the Act contravened.	Remarks.
Bengal —*contd.*	Burdwan .	1	2	2	Regulations 137 and 140 of the Indian Coal Mines Regulations, 1926.	
	Do. .	1	1	1	Regulations 137(2) of the Indian Coal Mines Regulations, 1926 and Rule 18 of the rules made by the Bengal Government under Section 30 of the Indian Mines Act, 1923.	
	Do. .	1	1	1	Section 15(1) and (2) of the Indian Mines Act, 1923.	
	Do. .	1	2	2	Section 19 (1-A) of the Indian Mines Act, 1923, Regulations 121 and 146 of the Indian Coal Mines Regulations, 1926.	
	Do. .	1	1	..	Regulation 3(3) of the Indian Coal Mines Regulations, 1926.	Case dropped as the summons could not be served, the accused, being in a native state.
	Do. .	2	2	1	Section 35(c) of the Indian Mines Act, 1923.	Case against one of the accused is pending.
	Do. .	1	1	..	Regulation 82 of the Indian Coal Mines Regulations, 1926 and Bye-law 9 made under Section 32 of the Indian Mines Act, 1923 read with Regulation 58(e) IV of the Indian Coal Mines Regulations, 1926.	Acquitted.
	Do. .	1	1	1	Regulation 95(2) of the Indian Coal Mines Regulations, 1926.	

APPENDIX III—*contd.*

Statement of prosecutions under the Indian Mines Act, during the year 1939—*contd.*

Province.	District.	Number of prosecutions.	Number of persons prosecuted.	Number of persons convicted.	Number of Regulations, Bye-laws and Rules and Sections of the Act contravened.	Remarks.
Bihar	Manbhum .	1	10	2	Order under Section 19 (1-A) of the Indian Mines Act, 1923, Section 22C of the Indian Mines Act, 1923 and Regulation 149 of the Indian Coal Mines Regulations, 1926 and Rule 9 of the rules made by the Bihar Government under Section 30 of the Indian Mines Act, 1923.	Three of the accused acquitted and case was dropped against five of the accused.
	Do. .	1	3	3	Order under Section 19 (1-A) of the Indian Mines Act, 1923.	
	Do. . .	1	2	2	Regulation 146 of the Indian Coal Mines Regulations, 1926.	
	Do. . .	1	2	2	Regulation 13 of the Indian Coal Mines Regulations, 1926.	
	Do. . .	1	1	1	Regulations 137(1) and (2) of the Indian Coal Mines Regulations, 1926, and Rule 17 of the rules made by the Bihar Government under Section 30 of the Indian Mines Act, 1923.	
	Do. . .	1	2	2	Bye-law 48 read with Bye-law 31 of the Bye-laws made under Section 30 of the Indian Mines Act, 1923 and Rule 9-A of the rules made by the Bihar Government under Section 30 of the Indian Mines Act, 1923, read with Section 28(4) of the Indian Mines Act, 1923.	
	Do. . .	1	1	..	Regulation 137 of the Indian Coal Mines Regulations, 1926.	The case is pending.

APPENDIX III—*contd.*

Statement of prosecutions under the Indian Mines Act, during the year 1939—*contd.*

Province.	District.	Number of prosecutions.	Number of persons prosecuted.	Number of persons convicted.	Number of Regulations, Bye-laws and Rules and Sections of the Act contravened.	Remarks.
Bihar—*contd.*	Manbhum .	1	1	1	Section 15 of the Indian Mines Act, 1923, read with Regulations 23 and 24 of the Indian Coal Mines Regulations, 1926, Regulation 70(2) of the Indian Coal Mines Regulations, 1926, read with Regulations 71 and 69 of the Indian Coal Mines Regulations, 1926.	
	Bhagalpur .	1	2	2	Section 29(j) of the Indian Mines Act, 1923, read with Notification No. M.-1055, dated 7th March 1929, issued by the Government of India, Department of Industries and Labour. Section 26 read with Section 3(c) of the Indian Mines Act, 1923, Regulations 46 and 16 of the Indian Metalliferous Mines Regulations, 1926.	
	Hazaribagh .	1	3	3	Section 29(j) of the Indian Mines Act, 1923, read with Notification No. M.-1055, dated 7th March 1929, issued by the Government of India, Department of Industries and Labour, Section 28 of the Indian Mines Act, 1923, read with Rule 9 of rules made by the Bihar Government under Section 30 of the Indian Mines Act, 1923 and Regulations 41 and 42 of the Indian Metalliferous Mines Regulations, 1926.	
	Manbhum .	1	1	1	Regulations 6 and 3(1) of the Indian Coal Mines Regulations, 1926.	

APPENDIX III—*contd.*

Statement of prosecutions under the Indian Mines Act, during the year 1939—*contd.*

Province.	District.	Number of prosecutions.	Number of persons prosecuted.	Number of persons convicted.	Number of Regulations, Bye-laws and Rules and Sections of the Act contravened.	Remarks.
Bihar—*contd.*	Manbhum .	1	1	1	Sections 15 and 35(c) of the Indian Mines Act, 1923, Rules 8, 18 and 12 and 14 of the rules made by the Bihar Government under Section 30 of the Indian Mines Act, 1923 and Regulation 15(4) of the Indian Coal Mines Regulations, 1926.	
	Do. . .	1	3	3	Rules 16 and 18 of the rules made by the Bihar Government under Section 30 of the Indian Mines Act, 1923 read with Regulation 137 of the Indian Coal Mines Regulations, 1926.	
	Do. . .	1	3	..	Regulations 5 of the Indian Coal Mines Regulations, 1926.	The case was withdrawn.
	Do. . .	1	2	2	Bye-law 48, read with Bye-law 31 of the Bye-laws made under Section 30 of the Indian Mines Act, 1923 and Rule 9-A of the rules made by the Bihar Government under Section 30 of the Indian Mines Act, 1923 read with Section 28(4) of the Indian Mines Act, 1923.	
	Hazaribagh .	1	1	1	Section 26 of the Indian Mines Act, 1923, read with Section 3(c), Section 15 of the Indian Mines Act, 1923, Rules 8 and 9 of the rules made by the Bihar Government under Section 30 of the Indian Mines Act, 1923 and Regulation 38 of the Indian Metalliferous Mines Regulations, 1926.	

APPENDIX III—*contd.*

Statement of prosecutions under the Indian Mines Act, during the year 1939—*contd.*

Province.	District.	Number of prosecutions.	Number of persons prosecuted.	Number of persons convicted.	Number of Regulations, Bye-laws and Rules and Sections of the Act contravened.	Remarks.
Bihar—*contd.*	Manbhum .	1	2	2	Regulations 78 (2), 137 and 15 of the Indian Coal Mines Regulations, 1926.	
	Do. .	1	1	1	Regulations 58(k) and 137 of the Indian Coal Mines Regulations, 1926.	
	Do. .	1	1	1	Regulation 75 of the Indian Coal Mines Regulations, 1926, Section 28 (1) and (3) of the Indian Mines Act, 1923, read with Rule 9, Rule 8 of the rules made by the Bihar Government under Section 30 of the Indian Mines Act, 1923 and Regulation 137 of the Indian Coal Mines Regulations, 1926.	
	Do. .	1	8	8	Regulations 145 and 149 of the Indian Coal Mines Regulations, 1926.	
	Do. .	1	2	1	Regulations 145 of the Indian Coal Mines Regulations, 1926.	Case against one of the accused dropped, as he absconded.
	Do. .	1	2	..	Bye-law 8 of the Bye-laws made under Section 32 of the Indian Mines Act, 1923.	The case is pending.
	Do. .	1	2	2	Regulation 137 of the Indian Coal Mines Regulations, 1926 and rule 8 of the rules made by the Bihar Government under Section 30 of the Indian Mines Act, 1923.	

APPENDIX III—*contd.*

Statement of prosecutions under the Indian Mines Act, during the year 1939—*contd.*

Province.	District.	Number of prosecutions.	Number of persons prosecuted.	Number of persons convicted.	Number of Regulations, Bye-laws and Rules and Sections of the Act contravened.	Remarks.
Bihar—*contd.*	Monghyr .	1	2	2	Regulations 48, 54, 41, 42 and 46 of the Indian Metalliferous Mines Regulations, 1926.	
	Hazaribagh .	1	2	2	Section 26-A of the Indian Mines Act, 1923 read with Rule 17 of the rules made by the Bihar Government under Section 30 of the Indian Mines Act, 1923, Section 28 (1) of the Indian Mines Act, 1923 read with Rule 9 of the rules made by the Bihar Government under Section 30 of the Indian Mines Act, 1923 and Regulation 38 of the Indian Metalliferous Mines Regulations, 1926.	
	Do. .	1	2	2	Section 26-A of the Indian Mines Act, 1923 read with Rule 17 of the rules made by the Bihar Government under Section 30 of the Indian Mines Act, 1923, Regulation 54 of the Indian Metalliferous Mines Regulations, 1926 and Rule 8 of the rules made by the Bihar Government under Section 30 of the Indian Mines Act, 1923.	
	Monghyr .	1	3	3	Section 26 read with Section 3 (c) of the Indian Mines Act, 1923, Regulations 16, 48 read with Regulation 44 of the Indian Metalliferous Mines Regulations, 1926 and Rule 8 of the rules made by the Bihar Government under Section 30 of the Indian Mines Act, 1923.	

APPENDIX III—*contd.*

Statement of prosecutions under the Indian Mines Act, during the year 1939—*contd.*

Province.	District.	Number of prosecutions.	Number of persons prosecuted.	Number of persons convicted.	Number of Regulations, Bye-laws and Rules and Sections of the Act contravened.	Remarks.
Bihar—*contd.*	Manbhum .	4	9	4	Section 35 (e) of the Indian Mines Act, 1923.	One of the accused was acquitted, one died and the case against three was dropped as they were untraced.
	Gaya . .	1	1	1	Regulation 3(1) of the Indian Metalliferous Mines Regulations, 1926.	
	Do. . .	1	1	..	Regulation 3(1) of the Indian Metalliferous Mines Regulations, 1926.	The accused was acquitted.
	Monghyr .	1	1	1	Regulation 3(1) of the Indian Metalliferous Mines Regulations, 1926.	
	Singhbhum .	1	1	1	Regulation 3(1) of the Indian Metalliferous Mines Regulations, 1926.	
	Manbhum .	1	3	..	Regulation 3(3) of the Indian Coal Mines Regulations, 1926.	The case was withdrawn.
	Do. .	1	1	1	Section 35(c) of the Indian Mines, Act, 1923.	
	Hazaribagh .	1	1	..	Regulations 72, 64(3) and 71 of the Indian Metalliferous Mines Regulations, 1926.	The accused was acquitted.
	Do. .	1	2	2	Regulations, 43(1), 38 and 46 of the Indian Metalliferous Mines Regulations, 1926 and Rules 8 and 15 of the rules made by the Bihar Government under Section 30 of the Indian Mines Act, 1923.	

APPENDIX III—*contd.*

Statement of prosecutions under the Indian Mines Act, during the year 1939 —*contd.*

Province.	District.	Number of prosecutions.	Number of persons prosecuted	Number of persons convicted.	Number of Regulations, Bye-laws and Rules and Sections of the Act contravened.	Remarks.
Bihar—*concld.*	Manbhum .	1	1	1	Section 15 of the Indian Mines Act, 1923 read with Regulations 23 and 24 and Regulation 70(2) read with Regulation 71 of the Indian Coal Mines Regulations, 1926.	
	Do. .	1	1	..	Regulation 17 of the Indian Coal Mines Regulations, 1926.	The case is pending.
	Santhal Parganas.	1	4	..	Section 15 of the Indian Mines Act, 1923, read with Regulation 23 of the Indian Coal Mines Regulations, 1926.	The case is pending.
Central Provinces.	Chhindwara .	1	2	2	Regulations 66(2) and 146 of the Indian Coal Mines Regulations, 1926 and Bye-law 61 of the Bye-laws made under section 32 of the Indian Mines Act, 1923.	
	Jubbulpur .	1	1	1	Regulation 3(1) of the Indian Metalliferous Mines Regulations, 1926.	
	Chhindwara .	1	1	1	Bye-law 41 of the Bye-laws made under section 32 of the Indian Mines Act, 1923.	
	Do. .	1	2	2	Regulations 95(2) and 143 and 148 of the Indian Coal Mines Regulations, 1926.	
	Do. .	1	1	1	Regulation 117 of the Indian Coal Mines Regulations, 1926.	
	Do. .	1	1	1	Regulation 146 of the Indian Coal Mines Regulations, 1926.	

APPENDIX III—*concld.*

Statement of prosecutions under the Indian Mines Act, during the year 1939 —*concld.*

Province.	District.	Number of prosecutions.	Number of persons prosecuted.	Number of persons convicted.	Number of Regulations, Bye-laws and Rules and Sections of the Act contravened.	Remarks.
Central Provinces. —*contd.*	Chhindwara .	1	1	1	Regulations 109 and 110 of the Indian Coal Mines Regulations, 1926.	
	Do. .	2	4	1	Regulation 145 of the Indian Coal Mines Regulations, 1926.	The three accused were acquitted.
	Do. .	3	4	4	Bye-law 8 of the Bye-laws made under Section 32 of the Indian Mines Act, 1923.	
	Do. .	3	3	3	Regulations 109, 110 and 117 of the Indian Coal Mines Regulations, 1926.	
	Do. .	1	1	..	Regulations 106 and 145 of the Indian Coal Mines Regulations, 1926.	Complaint dismissed under Section 204 Criminal Procedure Code.
	Do. .	1	1	1	Regulations 118 of the Indian Coal Mines Regulations, 1926.	
	Do. .	1	1	1	Regulation 70(3) (5) of the Indian Coal Mines Regulations, 1926.	
	Do. .	1	1	1	Regulations 142 and 147 of the Indian Coal Mines Regulations, 1926.	
Punjab .	Gurgaon .	1	1	1	Regulation 3(1) of the Indian Metalliferous Mines Regulations, 1926.	
	Allahabad .	1	1	1	Regulation 3(1) of the Indian Metalliferous Mines Regulations, 1926.	
	Do. .	1	2	..	Section 41 of the Indian Mines Act, 1923.	

APPENDIX IV.

Miscellaneous.

Statement No. 1.

LIST OF INSPECTION CIRCLE.

No. 1 Circle.	No. 2 Circle.
1. All mines in Baluchistan.	1. All mines in Assam.
2. All mines in Bihar except mines in the District of the Santhal Parganas and such mines in the District of Manbhum as lie east of a line drawn from mile 175 on the Bengal Nagpur Railway to mile 169 on the Grand Trunk Road and continued in a straight line across the District.	2. All mines in Bengal.
3. All mines in Orissa.	3. Such mines in Bihar as lie in the District of the Santhal Parganas and in the District of Manbhum east of a line drawn from mile 175 on the Bengal Nagpur Railway to mile 169 on the Grand Trunk Road and continued in a straight line across the District.
4. All mines in the North-West Frontier Province	4. All mines in Bombay.
5. All mines in the Punjab.	5. All mines in the Central Provinces.
6. All mines in Rajputana.	6. All mines in Madras.
7. All mines in the United Provinces.	

Statement No. 2.

Names of persons to whom first and second class coal mine managers' certificates of competency and surveyors' certificates of competency were granted during the year 1939.

Certificates granted to holders of British certificates of competency.

(*a*) FIRST CLASS.

Name.	Number of Indian certificate.	Date of Indian Certificate.	Number of British Certificate.	Date of British Certificate.
Charlton, William John .	406	10th January 1939	2592	24th July 1931.
Fairbank, Richard Herbert .	407	10th January 1939	2869	2nd August 1935.
Lawther, Benjamin . .	408	26th April 1939 .	2266	2nd August 1928.
Leggate, John . . .	409	26th April 1939 .	960	4th February 1937.
Ghosh, Bhagaban Ram . .	410	16th Nov. 1939 .	3091	24th February 1939.
Brown, William Kenneth .	411	16th Nov. 1939 .	2281	25th January 1929.
Duncan, James . . .	412	16th Nov. 1939 .	2901	14th February 1936.
Boothroyd, James Edgar .	413	16th Nov. 1939 .	1732	5th February 1925.
Atkinson, Ronald . .	414	16th Nov. 1939 .	2862	2nd August 1935.

APPENDIX IV—*contd.*

Miscellaneous—*contd.*

Statement No. 2—*contd.*

Names of persons to whom first and second class coal mine managers' certificates of competency and surveyors' certificates of competency were granted during the year 1939—*contd.*

INDIAN CERTIFICATES.

(*a*) FIRST CLASS.

Name.	Number of certificate.	Date of certificate.	Remarks.
Ghosh, Prafulla Kumar	268	24th April 1939.	
Mandal, Pundarikaksha	269	Ditto.	
Chaudhury, Paresh Nath	270	Ditto.	
Paul, Jagannath	271	Ditto.	
Ghosh, Sunil Krishna	272	Ditto.	
Mukherjee, Chandra Shekhar . . .	273	Ditto.	
Krishnan, Subbuswami Iyer Gopala . .	274	Ditto.	

(*b*) SECOND CLASS.

Name.	Number of certificate.	Date of certificate.	Remarks.
Ramnathan, S. N.	563	24th April 1939.	
Watcha, Fredon S.	564	Ditto.	
Bose, Amal Chandra	565	Ditto.	
Claire, N. Singh	566	Ditto.	
Anand, Trilok Chand	567	Ditto.	
Marwaha, Babu Ram	568	Ditto.	
Saidha, Jagan Nath	569	Ditto.	
Babri, Rafiq Ahmad	570	Ditto.	
Burman, Priya Nath Roy	571	Ditto.	
Gupte, Dwarkanath Gujanan . . .	572	Ditto.	

APPENDIX IV—*contd.*

Miscellaneous—*contd.*

Statement No. 2—*contd.*

Names of persons to whom first and second class coal mine managers' certificates of competency and surveyors' certificates of competency were granted during the year 1939—*contd.*

INDIAN CERTIFICATES—*contd.*

(*b*) SECOND CLASS—*contd.*

Name.	Number of certificate.	Date of certificate.	REMARKS.
Mukherjee, Bhupendra Nath . . .	573	24th April 1939.	
Chatterjee, Butto Krishna . . .	574	Ditto.	
Ghatak, Shib Chandra	575	Ditto.	
Chatterjee, Nirmal Krishna . . .	576	Ditto.	
Mukherjee, Jay Ram	577	Ditto.	
Banerjee, Sasmita Badan	578	Ditto.	
Tata, Tehma Siavash	579	Ditto.	
Mukherjee, Gopal Chandra . . .	580	Ditto.	
Ray, Mahadeo	581	Ditto.	
Singh, Iqbal	582	Ditto.	
Choudhury, Saradindu	583	Ditto.	
Mukherjee, Sushil Chandra . . .	584	Ditto.	
Samanta, Bankim Chandra . . .	585	Ditto.	
Sen Gupta, Bimalaranjan . . .	586	Ditto.	

Certificates granted to holders of British certificates of competency.

(*c*) SURVEYORS' CERTIFICATES.

Name.	Number of British certificate.	Date of British certificate.	Number of Indian certificate.	Date of Indian certificate.
Jackson, Reginald Robert George.	1,163	2nd August 1935 .	7	10th January 1939.

APPENDIX IV—*contd.*

Miscellaneous—*contd.*

Statement No. 2—*concld.*

Names of persons to whom first and second class coal mine managers' certificates of competency and surveyors' certificates of competency were granted during the year 1939—*contd.*

INDIAN CERTIFICATES—*concld.*

(*c*) SURVEYORS' CERTIFICATES—*contd.*

Name.	Number of certificate.	Date of certificate.	REMARKS.
Deo, Ram Chandra Gopal	109	10th January 1940.	
Dalal, Sib Nath	110	Ditto.	
De, Murari Mohan	111	Ditto.	
Jain, Inder Sain	112	Ditto.	
Mukherjee, Radha Gobinda . . .	113	Ditto.	
Goswamy, Amulya Kumar . . .	114	Ditto.	
Sinha, Kedar Nath	115	Ditto.	
Pathak, Bashishar Dutt	116	Ditto.	
Ghosh, Nihar Ranjan	117	Ditto.	
Khanna, Raja Ram	118	Ditto.	
Temarhikar, Prabhakar Shankar . .	119	Ditto.	
Banerjee, Baidya Nath . . .	120	Ditto.	
Sahai, Bhagwan Sharan . . .	121	Ditto.	
Chatterjee, Gura Shankar	122	Ditto.	
Pasi, Nand Lal	123	Ditto.	
Bhargava, Bharadwaj	124	Ditto.	
Chatterjee, Magaram	125	Ditto.	
Chattoraj, Gokul Kanta	126	Ditto.	
Sinha, Tinkori	127	Ditto.	
Chatterjee, Pankaja Kumar . . .	128	Ditto.	
Samanta, Lalit Madhab	129	Ditto.	
Das, Suresh Chandra	130	Ditto.	
Mukerjee, Manindra Nath	131	Ditto.	
Chopra, H. L.	132	Ditto.	
Ghose, Hari Pado	133	Ditto.	

APPENDIX IV.—*contd.*

Miscellaneous—*contd.*

Statement No 3.

NOTIFICATION.

New Delhi, the 16th January 1939.

No. M.-1055.—In exercise of the powers conferred by section 30 of the Indian Mines Act, 1923 (IV of 1923), the Central Government is pleased to direct that the following further amendments shall be made in the rules under the said section published with the notification of the Government of Madras in the Development Department, No. 6, dated the 26th November 1924, the same having been previously published as required by sub-section (*1*) of section 31 of the said Act, namely:—

1. For rules 9 and 9-A, of the said Rules, the following rules shall be substituted, namely:—

"9. The register of all persons employed in the mine referred to in section 28 (*1*) of the Act, shall be in the form in Schedule A, and shall be kept at the office of the mine.

9-A. The notice required under sub-section (*1*) of section 23-B, of the Act and the amended notice referred to in sub-section (*3*) of that section shall be in the form shown in Schedule B, written in English and in the court language of the district, and posted outside the office of the mine."

2. After rule 9-A, of the said Rules, the following rule shall be inserted, namely:—

"9-B. For every mine to which the Central Government may, by general or special order, declare sub-section (*4*) of section 28 of the Act to be applicable, there shall be kept at the office of the mine a register in the form in Schedule C which shall show at any moment the name of every person then working below ground in the mine."

3. After rule 23 of the said Rules, the following rules shall be added, namely:—

"24. The register referred to in sub-section (*2*) of section 20 of the Act shall be maintained in the form in Schedule D.

25. (*1*) Any person desirous of being employed in any mine which is not below ground may obtain a certificate from a qualified medical practitioner that he has completed his fifteenth year and that he is fit for employment in such mine.

(2) Any person desirous of being allowed to be present in any part of a mine which is below ground may obtain from a qualified medical practitioner—

(*a*) a certificate that he has completed his seventeenth year; or

(*b*) a certificate that he has completed his fifteenth year and that he is fit to be allowed to be present in any part of a mine which is below ground.

(3) Every certificate referred to in sub-rule (1) or sub-rule (2) shall be in the form in Schedule E.

(4) The left thumb-mark of the person to whom any such certificate is granted shall be impressed on the certificate in the presence of the practitioner granting the same.

(5) A practitioner granting any certificate under this rule may charge a fee not exceeding one rupee for the same.

(6) Any person to whom a certificate has been granted under sub-rule (1) or sub-rule (2) shall, when he is at work in a mine or when he is present in a mine, as the case may be, wear round his neck, a token giving a reference to his certificate.

26. (1) A qualified medical practitioner may, on receipt of a report from an Inspector of Mines and after examining the person to whom a certificate has been granted under rule 25, revoke the same for good and sufficient reasons to be recorded in writing.

(2) A practitioner revoking a certificate shall cause the word 'Revoked' to be written in red ink across the certificate.

(3) The practitioner may charge a fee not exceeding one rupee for revoking a certificate. Such fee shall be levied from the owner of the mine in which the holder of the certificate was employed or was present."

APPENDIX V—*contd.*

Miscellaneous—*contd.*

Statement No. 3—*contd.*

4. For Schedules A and B, appended to the said Rules, the following Schedules shall be substituted, namely :—

SCHEDULE A.

(*See* rule 9.)

Register of persons employed in mine.

(1) Name.
(2) Caste.
(3) Age and sex.
(4) Father's name or in the case of a married woman or widow, husband's name.
(5) Nature of employment.
(6) Periods of work fixed for the employee.
(7) Intervals for rest, if any, to which the employee is entitled.
(8) Days of rest to which the employee is entitled.
(9) Where work is carried on by a system of relays, the relay to which the employee belongs.
(10) Remarks.

NOTE.—(1) In making the entries in the register, the manager of the mine should so arrange the periods that no person employed in the mine is made to work in contravention of any of the provisions of Chapter VI of the Indian Mines Act, 1923.

(2) The register is not intended to serve as an attendance register and entries made in respect of an individual may hold good for long periods. Changes will be required only when an actual change occurs in the conditions of employment, for example, in the nature of the employment or in the periods of work.

SCHEDULE B.

(*See* rule 9-A.)

Notice of commencement and end of Work and rest intervals.

Name of the mine.

Name of the owner of the mine.

It is hereby notified that persons employed in this mine will begin and end their work at the hours and have rest intervals between the hours mentioned below :—

Kind of worker.	1st relay.		Interval for rest.		2nd relay. if any.		Interval for rest.		3rd relay. if any.		Interval for rest.		Remarks.
	Begins.	Ends.	Begins.	Ends.	Begins.	Ends.	Begins.	Ends.	Begins.	Ends.	Begins.	Ends.	
(1)	(2)		(3)		(4)		(5)		(6)		(7)		(8)
...	A.M. / P.M.	A.M. / P.M.	A.M. / P.M.	A.M. / P.M.	A.M. / P.M.	A.M. / P.M.	A.M. / P.M.	A.M. / P.M.	A.M. / P.M.	A.M. / P.M.	A.M. / P.M.	A.M. / P.M.	....

The words and letters not wanted should be scored out.

NOTE.—The work of persons employed below ground is to be reckoned from the time such persons leave the surface of the mine up to the time when they finally return thereto at the end of the relay.

APPENDIX IV—*contd.*

Miscellaneous—*contd.*

Statement No. 3—*contd.*

SCHEDULE C.

(*See* rule 9-B.)

Register of persons working below ground.

Name of the mine . . . . . } Front Page.
Name of the owner of the mine . . . . . }

Date	Name of the person leaving the surface.

NOTE.—Each name should be struck off or marked on the return to the surface of the person concerned.

SCHEDULE D.

(*See* rule 24.)

Register of minor accidents under section 20 (*2*)

Name of the mine . . . . . } Village, taluk and district.
Name of the owner of the mine . . . . . }

(1) Date of entry in the register.

(2) Name of the person injured.

(3) Date of the accident.

(4) Nature of the accident.

(5) Nature of the injury.

(6) Duration of the enforced absence of the injured person from work.

(7) Nature of the medical relief given to the injured.

APPENDIX IV—*contd.*

Miscellaneous—*contd.*

Statement No. 3—*contd.*

SCHEDULE E.

[*See* rule 25 (3).]

Certificate of age/age and fitness under section 26-A/30 (e) of the Indian Mines Act, 1923.

1. Name of the applicant.
2. Father's/Husband's name.
3. Sex and caste or religion.
4. Residence.
5. Age certified.
6. Physical fitness.
7. Whether bears marks of successful vaccination.
8. Distinctive marks.
9. Reasons for refusal of certificate*

Left thumb impression.

Place.

Date.

Signature of qualified medical practitioner.

* Exact details of causes of physical disability should be clearly stated.

CERTIFICATE.

I hereby certify that I have personally examined (name)
son/daughter/wife of
(caste, etc.)
bearing the following distinctive marks
residing at
who is desirous of being employed in a mine/allowed to be present in any part of a mine which is below ground and that his/her age as nearly as can be ascertained from my examination is
years and that he/she is fit for employment in a mine/to be present in any part of a mine which is below ground.

I further certify that he/she bears marks of successful vaccination and that he/she has been revaccinated within the last three years.

Left thumb impression

Place

Date

Qualified medical practitioner.

APPENDIX IV—*contd.*

Miscellaneous—*contd.*

Statement No. 3—*contd.*

5. In the Abstracts in rule 20-A of the said Rules,—

I. In the entries under the heading " Indian Mines Act, 1923 ",—

(*a*) for paragraph 5, the following paragraph shall be substituted, namely :—

" 5 (1) No person shall be allowed to work in a mine—

(*a*) on more than six days in any one week (section 22-A) or

(*b*) if he is employed above ground, for more than fifty-four hours in any week or for more than ten hours in any day [section 22-B (1)] or

(*c*) if he is employed below ground, for more than nine hours in any day [section 22-C (1)] or

(2) No person shall be allowed to work in a mine who has already been working in any other mine within the preceding twelve hours (section 23)."

(*b*) for paragraph 5-A, the following paragraph shall be substituted, namely :—

" 5-A. (1) The periods of work for any person referred to in paragraph 5 (1) (*b*) above, along with his intervals for rest, shall not in any day spread over more than twelve hours, and he shall not work for more than six hours before he has had an interval for rest of at least one hour [section 22-B (2)].

(2) Persons belonging to two or more relays shall not be allowed to do work of the same kind above ground at the same moment, provided that they shall not be deemed to belong to separate relays by reason only of the fact that they receive their intervals for rest at different times [section 22-B (3)].

(3) Work of the same kind shall not be carried on below ground in any mine for a period spreading over more than nine hours in any day, except by a system of relays so arranged that the periods of work for each relay are not spread over more than nine hours [section 22-C (2)].

(4) No person employed in a mine shall be allowed to be in any part of the mine below ground except during the periods of work shown in respect of him in the register kept under section 28 (1) [section 22-C (3)].

(5) Where a worker works in a relay during a period extending over midnight, the ensuing day for him shall be deemed to be the period of twenty-four hours beginning at the end of the period of work fixed for the relay and the hours he has worked after midnight shall be counted towards the previous day [section 22-D]."

(*c*) for sub-paragraph (1) of paragraph 5-B, the following sub-paragraph shall be substituted, namely :—

" (1) A notice in the prescribed form stating—

(i) the time of the commencement and of the end of work at the mine and of each relay where work is carried by a system of relays ; and

(ii) the time of the commencement and of the end of the intervals for rest fixed for persons employed above ground shall be posted outside the office of the mine and a copy thereof shall be sent to the Chief Inspector of Mines if he so requires [section 23-B (1)]."

(*d*) for sub-paragraph (3) of paragraph 5-B, the following sub-paragraphs shall be substituted, namely :—

" (3) Where any change in the time fixed for the commencement or for the end of the work in the mine generally or for any relay or in the rest intervals fixed for persons employed above ground is proposed, an amended notice in the prescribed form shall be posted outside the office of the mine not less than seven days before the change is made and a copy of such notice shall be sent to the Chief Inspector of Mines not less than seven days before such change [section 23-B (3)].

APPENDIX IV—*contd.*

Miscellaneous—*contd.*

Statement No. 3—*contd.*

(4) No person shall be allowed to work in a mine otherwise than in accordance with the notice required by clause (1) of this abstract [section 23 (4)]."

(*e*) for paragraph 6, the following paragraph shall be substituted, namely :—

" 6. (*a*) No person who has not completed his fifteenth year shall be employed in a mine or be allowed to be present in any part of a mine which is below ground [section 26].

(*b*) No person who has not completed his seventeenth year shall be allowed to be present in any part of a mine which is below ground, unless—

(1) a certificate of fitness in the prescribed form granted to him by a qualified medical practitioner is in the custody of the manager of the mine ; and

(2) he carries while at work a token giving a reference to such certificate [section 26-A]."

(*f*) for paragraph 7, the following paragraph shall be substituted, namely :—

" 7. (1) For every mine there shall be kept a register in the prescribed form of all persons employed in the mine showing in respect of each such person—

(*a*) the nature of his employment,

(*b*) the periods of work fixed for him,

(*c*) the intervals of rest, if any, to which he is entitled,

(*d*) the days of rest to which he is entitled, and

(*e*) where work is carried on by a system of relays, the relay to which he belongs [section 28 (1)].

(2) No person shall be employed in a mine until the particulars required by sub-paragraph (1) of this paragraph have been recorded in the register in respect of such person, and no person shall be employed except during the periods of work shown in respect of him in the register [section 28 (3)].

(3) Minor accidents which cause bodily injury resulting in the enforced absence from work of the person injured for a period exceeding forty-eight hours shall be entered in a special register maintained in the prescribed form. A copy of the entries in the register shall be forwarded by the owner, agent or manager of the mine within fourteen days after the 30th day of June and the 31st day of December in each year to the Chief Inspector of Mines [section 20 (2) and (3)]."

(*g*) Paragraph 12 shall be renumbered as paragraph 12 (1) and to that paragraph as so renumbered, the following sub-paragraph shall be added, namely :—

"(2) Whoever in contravention of sub-paragraph (3) of paragraph 7 fails to record minor accidents in the prescribed register or to give notice of any accidental occurrence shall be punishable with fine which may extend to five hundred rupees [section 38 (2)]."

II. In the entries under the heading " Abstract of the rules (for mines other than coal mines)."

(*a*) after paragraph 5, the following paragraphs shall be added, namely :—

" 6. (1) Any person desirous of being employed in any mine which is not below ground may obtain a certificate from a qualified medical practitioner that he has completed his fifteenth year and that he is fit for employment in such mine.

(2) Any person desirous of being allowed to be present in any part of a mine which is below ground may obtain from a qualified medical practitioner—

(*a*) a certificate that he has completed his seventeenth year ; or

(*b*) a certificate that he has completed his fifteenth year and that he is fit to be allowed to be present in any part of a mine which is below ground.

APPENDIX IV—*contd.*

Miscellaneous—*contd.*

Statement No. 3—*contd.*

(3) The left thumb-mark of the person to whom any such certificate is granted shall be impressed on the certificate in the presence of the practitioner granting it.

(4) A practitioner granting any such certificate may charge a fee not exceeding one rupee for it.

(5) Any person to whom such a certificate has been granted shall, when he is at work in a mine or when he is present in a mine, as the case may be, wear round his neck, a token giving a reference to his certificate. (Rule 25.)

7. (*a*) (1) A qualified medical practitioner may, on receipt of a report from an Inspector of Mines and after examining the person to whom a certificate has been granted under paragraph 25, revoke the same for good and sufficient reasons to be recorded in writing.

(2) A practitioner revoking a certificate shall cause the word 'Revoked' to be written in red ink across the certificate.

(3) The practitioner may charge a fee not exceeding one rupee for revoking a certificate. Such fee shall be levied from the owner of the mine in which the holder of the certificate was employed or was present. (Rule 26.)"

(*b*) *for* the existing Form under paragraph 3 *substitute* the following :—

SCHEDULE A.

(*See* rule 9.)

Register of persons employed in mine.

(1) Name.

(2) Caste.

(3) Age and sex.

(4) Father's name or in the case of a married woman or widow, husband's name.

(5) Nature of employment.

(6) Periods of work fixed for the employee.

(7) Intervals for rest, if any, to which the employee is entitled.

(8) Days of rest to which the employee is entitled.

(9) Where work is carried on by a system of relays, the relay to which the employee belongs.

(10) Remarks.

NOTE.—(1) In making the entries in the register, the manager of the mine should so arrange the periods that no person employed in the mine is made to work in contravention of any of the provisions of Chapter VI of the Indian Mines Act, 1923.

(2) The register is not intended to serve as an attendance register and entries made in respect of an individual may hold good for long periods. Changes will be required only when an actual change occurs in the conditions of employment, for example, in the nature of the employment or in the periods of work."

(*c*) *for* paragraph 3-A *substitute* the following :—

"3-A. The notice required under sub-section (1) of section 23-B of the Act and the amended notice referred to in sub-section (3) of that section shall be in the following form and shall be posted in English and in the Court language of the district outside the office of the mine.

APPENDIX IV—*contd.*

Miscellaneous—*contd.*

Statement No. 3—*concld.*

SCHEDULE B.

Notice of commencement and end of work and rest intervals.

Name of the mine.

Name of the owner of the mine.

It is hereby notified that persons employed in this mine will begin and end their work at the hours and have rest intervals between the hours mentioned below :—

Kind of worker.	1st relay.		Interval for rest.		2nd relay, if any.		Interval for rest.		3rd relay, if any.		Interval for rest.		Remarks.
	Begins.	Ends.	Begins.	Ends.	Begins.	Ends.	Begins.	Ends.	Begins.	Ends.	Begins.	Ends.	
(1)	(2)		(3)		(4)		(5)		(6)		(7)		(8)
	A.M. / P.M.	A.M. / P.M.	A.M. / P.M.	A.M. / P.M.	A.M. / P.M.	A.M. / P.M.	A.M. / P.M.	A.M. / P.M.	A.M. / P.M.	A.M. / P.M.	A.M. / P.M.	A.M. / P.M.	

The words and letters not wanted should be scored out.

NOTE.—The work of persons employed below ground is to be reckoned from the time such persons leave the surface of the mine up to the time when they finally return thereto at the end of the relay.

(Rule 9-A.)"

M. S. A. HYDARI,
Secy. to the Govt. of India.

APPENDIX IV—*contd.*

Miscellaneous—*contd.*

Statement No. 4.

NOTIFICATION.

New Delhi, the 9th February 1939.

No. M.-955.—In exercise of the powers conferred by section 30-A of the Indian Mines Act, 1923 (IV of 1923), the Central Government is pleased to make the following rules, the same having been previously published as required by sub-section (*1*) of section 31 of the said Act, namely :—

COAL MINES RESCUE RULES.

CHAPTER I.

PRELIMINARY.

1. *Short title and commencement.*—(*1*) These rules may be called the Coal Mines Rescue Rules, 1939.

(*2*) Rules 1 to 27 shall come into force at once. The remaining rules shall come into force on such date as the Central Government may, by notification in the *Gazette of India*, appoint.

2. *Extent.*—These rules shall apply to—

(*i*) the area known as the Jharia coalfield in the province of Bihar; and

(*ii*) the area known as the Raniganj coalfield in the provinces of Bengal and Bihar.

3. *Definitions.*—In these rules, unless there is anything repugnant in the subject or context,—

(*a*) "The Act" means the Indian Mines Act, 1923;

(*b*) "Chief Inspector" means the Chief Inspector of Mines;

(*c*) "Committee" means the Rescue Stations Committee constituted under rule 4;

(*d*) "Member" means a member of the Committee; and

(*e*) "President" means the President of the Committee.

CHAPTER II.

CONSTITUTION AND PROCEDURE OF COMMITTEE.

4. *Constitution of Rescue Stations Committee.*—(*1*) The Central Government shall constitute a Committee consisting of the following members for the establishment, maintenance and management of Rescue Stations in the areas to which these rules apply, namely :—

(*i*) an Inspector of Mines, nominated by the Chief Inspector;

(*ii*) one person nominated by the Indian Mining Association;

(*iii*) one person nominated in rotation for the term of office specified in sub-rule (*1*) of rule 5 by the following bodies in order of priority :—

(*a*) the Indian Mining Federation;

(*b*) the Indian Colliery Owners' Association;

(*iv*) one person nominated by the National Association of Colliery Managers, Indian Branch;

(*v*) one person nominated by the Indian Mine Managers Association; and

APPENDIX IV—*contd.*

Miscellaneous—*contd.*

Statement No. 4—*contd.*

CHAPTER II—*contd.*

(*vi*) two persons to represent the interests of persons employed in the mines situated in the areas to which these rules apply nominated in the manner described in clause (*e*) of section 10 of the Act:

Provided that, if any authority or body entitled to nominate any member fails to make any nomination within a period of thirty days from the date it is called upon by the Central Government to make the nomination, the Central Government may nominate a member to fill the vacancy.

(*2*) The members shall elect one of their number as President.

(*3*) No act done by a Committee shall be questioned on the ground merely of the existence of any vacancy in, or any defects in the constitution of the Committee.

5. *Term of office.*—(*1*) Save as otherwise provided in these rules, a member shall hold office for three years from the date of his appointment and shall be eligible for re-nomination.

(*2*) A member nominated to fill a casual vacancy or a member appointed by the Central Government on the failure of any authority or body entitled to make a nomination, shall hold office so long as the member whose place he fills would have been entitled to hold office if the vacancy had not occurred or the nomination had been made, as the case may be.

(*3*) Inspectors of Mines shall hold office as directed by the Chief Inspector.

(*4*) Save as otherwise provided in these rules, the President shall hold the office of President for a period of three years from the date of his election and shall be eligible for re-election :

Provided that on ceasing to be a member, the President shall be deemed to have vacated the office of President and shall not, so long as he is not a member, be eligible for re-election.

6. *Resignation.*—(*1*) A member other than the President may resign his office by letter addressed to the President.

(*2*) The President may resign his office by letter addressed to the Central Government.

7. *Absence from India.*—(*1*) Before a member leaves India—

(*a*) he shall intimate to the President the date of his departure from and the date of his expected return to India ; and

(*b*) if he intends to be absent from India for a longer period than six months he shall tender his resignation.

(*2*) If any member leaves India without taking the action required by sub-rule (1), he shall be deemed to have resigned with effect from the date of his departure from India.

(*3*) If the President leaves India without resigning his office as President, he shall be deemed to have resigned from the date of his departure from India.

8. *Vacation of Office.*—(*1*) A member shall be deemed to have vacated his seat on the Committee—

(*a*) if he becomes bankrupt or insolvent or suspends payment or compounds with his creditors.

(*b*) if he is convicted of any offence which is punishable under the Indian Penal Code and is under the provisions of the Criminal Procedure Code non-bailable ; or

(*c*) if he is absent from meetings of the Committee during a period of three consecutive months without leave of absence from the Committee.

APPENDIX IV—*contd.*

Miscellaneous—*contd.*

Statement No. 4—*contd.*

CHAPTER II—*contd.*

(2) The Central Government may after such inquiry as it deems necessary declare that the President has vacated his office and the Committee shall thereupon elect another member as President.

9. *Time and place of meetings.*—(1) The President may at any time call a meeting of the Committee and shall do so if a requisition for that purpose is presented to him by four other members.

(2) The meetings of the Committee shall, unless the President in any case otherwise directs, be held at Dhanbad.

10. *Notice of meetings.*—Not less than seven clear days before any meeting of the Committee notices of the time and place of the intended meeting, signed by the President, shall be left at or posted to the usual place of residence of every other member:

Provided that in cases of urgency an emergency meeting may be summoned at any time by the President who shall inform the other members of the subject-matter for discussion and the reasons for which he considers it urgent. Business not arising out of the subject-matter shall not be introduced or transacted at an emergent meeting.

11. *Presiding at meetings.*—The President shall preside at every meeting of the Committee at which he is present. If the President is absent from any meeting the members present shall elect one of their number to preside over the meeting and the member so elected shall at that meeting exercise all the powers of the President.

12. *Quorum.*—No business shall be transacted at a meeting of the Committee unless at least four members are present:

Provided that if at any meeting less than four members attend the President may adjourn the meeting to a date not less than seven days later and inform the members present and notify other members that he proposes to dispose of the business at the adjourned meeting irrespective of a quorum, and it shall thereupon be lawful to dispose of the business at such adjourned meeting irrespective of the number attending.

13. *Powers and duties of the President.*—The President shall be the Principal Executive Officer of the Committee and, in addition to the other powers and duties conferred upon him by these rules, shall—

(a) present all important papers and matters to the Committee as early as practicable;

(b) issue orders as to the method of carrying out the decisions of the Committee;

(c) sign or, subject to a resolution by the Committe, authorise some other person to sign, cheques issued on behalf of the Committee;

(d) grant or, subject to a resolution by the Committee, authorise some other person to grant, receipts on behalf of the Committee for all moneys received under these rules;

(e) maintain or cause to be maintained an account of the receipts and expenditure of the Committee; and

(f) present an annual draft report on the working of the Committee to the Committee for approval and submit the report in the form approved by the Committee to the Central Government.

14. *Disposal of business.*—(1) All questions which the Committee is required to take into consideration shall be considered either at its meetings or by circulation of the papers as the President may direct.

(2) When a question is referred by circulation of papers any member may request that the question be considered at a meeting of the Committee. If three or more members make such a request the President shall direct that it be so considered; and if any member makes such a request, he may direct that it be so considered.

15. *List of Business.*—(1) The President shall circulate to the other members at least three days before a meeting of the Committee a list of business to be disposed of at that meeting.

(2) No business not on the list shall be considered without the permission of the President.

16. *Decision by majority.*—(1) Every question at a meeting of the Committee shall be decided by a majority of votes of the members present and voting on that question.

(2) Every question circulated to the members shall, unless the President in pursuance of sub-rule (2) of rule 14 reserves it for consideration at a meeting, be decided in accordance with the opinions of the majority recording opinions.

APPENDIX IV—*contd.*

Miscellaneous—*contd.*

Statement No. 4—*contd.*

CHAPTER II—*concld.*

(*3*) In the case of an equal division of votes or opinions, the President shall exercise an additional vote or opinion.

17. *Committee's establishment.*—(*1*) The Committee shall, from time to time, fix the scale of establishment and the salaries and allowances of all officers and servants to be employed by it and require security in such instances and to such amount as it thinks fit.

(*2*) Subject to the scale of establishment fixed under sub-rule (*1*), the President shall have power to appoint, dismiss, grant leave to, suspend or reduce any person in the service of the Committee :

Provided that—

(*a*) no person shall be appointed to ,or dismissed from, an office the salary of which is one hundred and fifty rupees or upwards without the sanction of the Committee at a meeting ;

(*b*) the grant of leave, pay and allowances to officers and servants of the Committee, who are not Government servants, shall be regulated by rules made by the Committee.

18. *Remuneration of members.*—Each member shall be paid Rs. 16 for each meeting attended by him, subject to a maximum of Rs. 32 for any one calendar month *plus* actual railway fare.

CHAPTER III.

FUNDS AND ACCOUNTS.

19. *Imposition of excise duty.*—There shall be levied and collected on all coal and coke despatched by rail from collieries situated in the areas to which these rules apply a duty of excise at the rate of 1½ pies per ton for one year from the 1st day of May 1939, and thereafter at such rate as the Central Government may, after consulting the Committee, by notification in the *Gazette of India*, fix :

Provided that, when it is proved to the satisfaction of the Committee or any person authorised in this behalf by the Committee, that any coke, on which such excise has been collected, has been manufactured from coal on which such excise had previously been collected, the Committee or person authorised in this behalf by the Committee may order the refund of the excise collected on such coke.

20. *Recovery of excise duty.*—The excise duty shall be collected by the Railway Administrations concerned by means of a surcharge on freight and shall be recovered—

(*a*) from the consignor, if the freight charges are being prepaid at the forwarding station.

(*b*) from the consignee, if the freight charges are collected at the destination of the consignment,

(*c*) from the party paying the freight, if the consignment is booked on the "weight only" system :

Provided that fractions of an anna, if any, in the total amount of the excise duty recoverable on any one consignment shall be rounded off to the nearest anna.

21. *Weight for charge.*—For the purpose of the levy of the excise duty, the weight of a consignment shall be that taken for the purpose of calculating the freight charges and fractions of a ton shall be rounded off to the nearest ton.

22. *Remittance of excise duty to the Committee.*—The total amount of excise duty collected by each Railway Administration in respect of despatches from the areas to which these rules apply, less—

(*a*) refunds and write-offs, authorised by the Railway Administration under rule 23,

(*b*) a deduction of such percentage not exceeding ten as the Central Government may, by notification in the *Gazette of India*, fix, towards the cost of collection,

shall be remitted quarterly to the Government treasury at Dhanbad for the credit of the Committee.

APPENDIX IV—*contd.*

Miscellaneous—*contd.*

Statement No. 4—*contd.*

CHAPTER III—*concld.*

23. *Refunds and recoveries.*—Where the amount of the excise duty due under these rules has not been collected or where the amount collected is in excess of the amount due, the Railway Administration shall deal with the undercharge or overcharge, as the case may be, on the same principles as apply to undercharges and overcharges in regard to railway freight charges.

24. *Deposit of moneys.*—All excise duty and other moneys received on behalf of the Committee shall be deposited in the Government treasury at Dhanbad to the credit of the Committee:

Provided that the Committee may from time to time authorise the retention in the charge of the President or any other person of such sum as it thinks fit as petty cash to meet contingent expenditure.

25. *Application of excise duty and other moneys received.*—The proceeds of the excise duty and any other moneys received by the Committee shall be applied to meeting the expenses of the Committee and the maintenance and upkeep of the Rescue Stations.

26. *Keeping, auditing and publication of accounts.*—(*1*) The Committee shall keep accounts of all moneys received and expended during each financial year.

(*2*) Such accounts shall be examined and audited annually by auditors appointed in this behalf by the Central Government.

(*3*) The auditors may disallow any item which has, in their opinion, been expended out of any moneys so received otherwise than as directed by or under these rules.

(*4*) If any item is disallowed, an appeal may be made to the Central Government whose decision shall be final.

(*5*) The audited statement of receipts and expenditure together with the annual report referred to in clause (*f*) of rule 13 shall be submitted to the Central Government not later than July in each year.

(*6*) An abstract statement of the receipts and expenditure shall be published annually in the *Gazette of India.*

CHAPTER IV.

RESCUE STATIONS.

27. *Maintenance and location of Rescue Stations.*—(*1*) The Committee shall establish as early as practicable and maintain one Rescue Station in the Jharia coalfield and one Rescue Station in the Raniganj coalfield.

(*2*) The Stations shall be located—

(*a*) for the Jharia coalfield at the junction of the Jharia and Sijua roads near the Imperial Bank of India;

(*b*) for the Raniganj coalfield near Asansol.

28. *Appointment of Superintendents.*—Each Rescue Station shall be placed under the control of a competent Superintendent who—

(*i*) has been for two years a Superintendent or Instructor at a rescue station or a member of a permanent rescue corps, or

(*ii*) has been fully trained in rescue work,

and has had five years' practical experience of underground work in a mine.

29. *Appointment of Instructors.*—(*1*) Not less than three competent instructors shall be employed at each Rescue Station to train rescue workers.

(*2*) No person shall be appointed as an Instructor unless he has had at least three years' practical experience of underground work in a mine.

APPENDIX IV—*contd.*

Miscellaneous—*contd.*

Statement No. 4—*contd.*

CHAPTER IV—*concld.*

(*3*) The Superintedent of the station may be included as an instructor for the purpose of sub-rule (*1*).

(*4*) At least one instructor shall always be in attendance at the Station and one instructor shall be appointed to take charge of the Station in the absence of the Superintendent.

30. *Permanent Rescue Corps.*—(*1*) A permanent rescue corps shall be maintained at each Rescue Station. Exclusive of the Superintendent and of the person appointed to take charge of the Station in his absence, the corps shall consist of not less than six fully trained men. One or more members shall be trained to act as leaders.

(*2*) It shall be the duty of the corps—

(*a*) to conduct rescue work and take all practicable steps to minimize danger in mines after any explosion or outbreak of fire or dangerous irruption of noxious or inflammable gas;

(*b*) generally to fulfil any other obligations imposed upon them by these rules.

31. *Attendance of Corps at Station.*—The members of the rescue corps maintained at a Rescue Station shall be continuously employed at the Station, and in constant residence there.

32. *Rescue apparatus and equipment.*—(*1*) At every Rescue Station there shall be provided and maintained, in good order and ready for immediate use, apparatus and equipment suitable and sufficient to enable the requirements of these rules to be carried out. Such apparatus and equipment shall include that specified in Schedule I to these rules.

(*2*) The following apparatus and equipment to be provided in pursuance of sub-rule (1) shall be of a type or standard approved by the Chief Inspector:—

(*a*) breathing apparatus;

(*b*) smoke helmets and other apparatus serving the same purpose;

(*c*) gas masks;

(*d*) reviving apparatus;

(*e*) electric safety lamps and flame safety lamps;

(*f*) first-aid boxes;

(*g*) fire extinguishers.

Any apparatus or equipment approved by the Chief Inspector in pursuance of this rule may be approved either absolutely or subject to conditions.

(*3*) No apparatus or equipment specified in heads (*a*) to (*g*) in sub-rule (*2*) shall be provided or used at any Rescue Station or mine if it is not of a type or standard approved by the Chief Inspector.

(*4*) Breathing apparatus for use at a mine in rescue work or training shall be obtained as required from the Rescue Station serving the mine.

(*5*) All breathing apparatus and every flow-meter shall be adjusted and tested periodically, and the purity of oxygen for use in breathing apparatus shall be tested. The tests shall be made in the manner prescribed in Schedule II to these rules.

33. *Accidents caused by equipment or apparatus.*—(*1*) A report in writing giving particulars of every accident or dangerous occurrence arising out of the use of any breathing apparatus or smoke helmets or other apparatus serving the same purpose at any mine, shall be sent within 24 hours of the accident or occurrence to the Inspector of the Circle by the manager of the mine.

(*2*) If any such accident or dangerous occurrence takes place at any Rescue Station, a similar report shall be sent by the Superintendent of the Station.

APPENDIX IV—*contd.*

Miscellaneous—*contd.*

Statement No. 4—*contd.*

CHAPTER V.

ORGANISATION AND EQUIPMENT AT MINES.

34. *Appointment of men from mines to act with permanent rescue corps.*—The manager of every mine situated in the areas to which these rules apply employing 100 or more persons underground on any one day of the preceding twelve months shall appoint on the following scale fully trained men to co-operate with the rescue station in rescue work and practice :—

Where the total number of persons employed underground is not more than 500 . . .	not less than one trained man.
Where the total number of persons employed underground is more than 500 but not more than 1,000	not less than two trained men.
Where the total number of persons employed underground is more than 1,000 but not more than 1,500	not less than three trained men.
Where the total number of persons employed underground is more than 1,500	not less than four trained men.

35. *Disposition of rescue workers.*—(*1*) So far as practicable it shall be arranged that trained men for rescue work at a mine, where there is more than one, shall not all be employed underground at the same time.

(*2*) Effective arrangements shall be made at every mine for summoning rescue workers immediately their services are required.

36. *Telephonic communication.*—Every mine situated in the areas to which these rules apply shall be in telephonic communication with the Rescue Station serving the mine :

Provided that if the number of persons employed underground in a mine does not exceed one hundred, the requirements of this rule shall be deemed to have been complied with if the office of the mine is situated within a distance of two miles from a telephone connected to the Rescue Station :

Provided further that the Chief Inspector may exempt any mine, where there is no public telephone system, from the provisions of this rule subject to such conditions as he may impose to ensure other prompt means of communication with the Rescue Station.

37. *Tracings showing ventilation, etc.*—There shall be kept at every mine, other than an open mine, in which the number of persons employed exceeds one hundred, situated in the areas to which these rules apply, in a form suitable for use by rescue workers, a sufficient number of clear and legible tracings, not being less than three, of the workings of the mine up to a date not more than six months previously, showing the ventilation and all principal doors, stoppings and air-crossings, regulators and telephone stations, and distinguishing the intake airways by a different colour from the return airways. The signs used in these tracings shall be those specified in Schedule III to these rules.

APPENDIX IV—*contd.*

Miscellaneous—*contd.*

Statement No. 4—*contd.*

CHAPTER V—*concld.*

38. *Selection of rescue workers.*—(*1*) The persons to be trained in rescue work shall be carefully selected on the grounds of their coolness, powers of endurance and general suitability for the work, and, in the case of men from mines to be trained to co-operate with permanent rescue corps, also on the ground of their knowledge of the mine.

(*2*) No person shall be trained as a rescue worker unless—

(*i*) he is certified by a qualified medical practitioner after examination in accordance with Schedule IV to these rules to be free from any organic disease or weakness, and to be fit for undertaking rescue work in a mine;

(*ii*) he is considered by the Superintendent of the Rescue Station to be suitable for rescue work with breathing apparatus;

(*iii*) the manager of the mine at which the person is employed certifies in writing that he has had sufficient underground experience for the purpose of rescue work; and

(*iv*) he is the holder of a certificate of proficiency in first-aid from an organization approved by the Chief Inspector.

39. *Medical examination of rescue workers.*—Every rescue worker so long as he continues to practise shall be re-examined every 12 months by a qualified medical practitioner in accordance with Schedule IV to these rules, and no person shall continue to practise after re-examination unless he is certified to be fit.

40. *Instruction and Practice.*—(*1*) Every person selected for training in rescue work shall undergo the course of instruction and practices set out in Part I of Schedule V to these rules, until he has been certified as efficient by the Superintendent.

(*2*) Rescue workers who have been so certified shall undergo practices and receive instruction as set out in Part II of Schedule V to these rules.

(*3*) All practices required by Schedule V shall last at least two hours except on occasion when, in the opinion of the Instructor, it is desirable in the interests of safety to curtail the practice. At some of the practices the breathing apparatus shall be worn continuously for two hours.

(*4*) A record shall be kept at every Rescue Station of all persons undergoing practices or receiving instruction in rescue work at the station. This record shall contain such particulars as the Chief Inspector may specify from time to time, including the date and character of each practice and the condition of each man after the practice, and if anything abnormal is observed in his condition, whether it is due to a defect of the apparatus or to the man himself.

41. *Code of Signals in training.*—The code of signals used in training shall be that set out in Schedule VI to these rules.

CHAPTER VI.

CONDUCT OF RESCUE WORK.

42. *Duties of Manager or principal official present at surface in emergencies.*—On receiving information of any emergency likely to require the services of a rescue corps or brigade, the manager, or, in his absence, the principal official present at the surface shall immediately—

(*a*) telephone to the Rescue Station; inform the responsible officer on duty at the Station of the character of the occurrence; state whether assistance will be needed from rescue brigades other than the permanent rescue corps or the brigades attached to the mine;

(*b*) summon the trained men attached to the mine;

(*c*) summon medical assistance;

(*d*) telephone to the Chief Inspector or Inspector;

(*e*) if necessary, communicate with the Police Station:

APPENDIX IV—*contd.*

Miscellaneous—*contd.*

Statement No. 4—*contd.*

CHAPTER VI—*contd.*

Provided that if the mine is not in telephonic communication with the Rescue Station a message shall be sent by a reliable person to the nearest telephone for immediate communication to the Rescue Station and the Chief Inspector or Inspector.

43. *Entry into mines for rescue operations.*—(*1*) No person shall be allowed to enter a mine or part of mine which is unsafe for the purpose of engaging in rescue operations unless authorised by the manager, or, in his absence, by the principal official of the mine present at the surface. Only men trained in the use of breathing apparatus shall be permitted to enter the mine for the purpose of using such apparatus.

(*2*) During the progress of such operations, a person or persons shall be stationed at the entrance of the mine and required to keep a written record of all persons entering and leaving the mine.

44. *Leader.*—(*1*) Every corps or brigade engaged in work with breathing apparatus in a mine shall be under a leader appointed by the Superintendent of a Rescue Station.

(*2*) The leader shall not engage in manual work. He shall give his attention solely to directing the brigade and to maintaining its safety. He shall examine the roof and supports during the journey in and, if there is any likelihood of a fall, shall not proceed until the brigade has made the place secure.

45. *Numbers employed.*—The number of persons in any corps or brigade using breathing apparatus in a mine shall not be less than five or more than six including the leader.

46. *Supply of Oxygen.*—If the type of apparatus admits of it, at least one person in every corps or brigade shall wear an apparatus with an extension for the supply of oxygen to another person in case of necessity.

47. *Instructions to brigade regarding rescue operations.*—(*1*) Prior to sending a brigade underground clear instructions shall be given by the principal official of the mine for the time being on the surface, or by a responsible person deputed by the agent or manager, to the leader of the brigade as to where it shall go and what it shall attempt.

(*2*) If the Superintendent of the Rescue Station serving the mine is present, the manager or the principal official in charge of the mine shall consult him before issuing such instructions.

(*3*) Unless the leader is personally thoroughly familiar with the roadways in question, the route to be followed shall be marked on a tracing, which the leader shall take with him into the mine.

(*4*) The leader shall not permit the brigade to go underground until he has received such instructions and, if necessary, such tracing.

(*5*) The leader shall not deviate from the instructions received by him except when such deviation is necessary for the purpose of saving human life.

Fresh air bases.—(*1*) As soon as possible a base or bases shall be established in fresh air, as near to the irrespirable zone or zones as safety permits. Each such base shall, if possible, be connected by telephone if the base is underground to the surface or if the base is on the surface to the shaft bottom.

(*2*) Except in cases where the delay involved may result in danger to life, no brigade shall proceed beyond any place where a base is to be established until there have been stationed at such base the following :—

(*a*) two men, of whom at least one should understand rescue appliances and first-aid;

(*b*) a spare brigade with rescue apparatus and ready for immediate service;

(*c*) one or more reviving apparatus, oxygen-revivers, stretchers, and birds.

(*3*) Whenever men are already at work beyond the base, there shall be stationed at the base as soon as possible the persons, spare brigade, apparatus and equipment specified in clauses (*a*), (*b*) and (*c*) of sub-rule (*2*).

49. *Supply of gas-masks and arrangements at surface.*—If the manager considers it necessary for safety, persons engaged in dealing with a fire shall be equipped with gas-masks and a rescue brigade equipped with apparatus shall be maintained on the surface in case of necessity.

APPENDIX IV—*contd.*

Miscellaneous—*contd.*

Statement No. 4—*contd.*

CHAPTER VI—*concld.*

50. *Test of apparatus.*—Before proceeding underground the leader shall test, or witness the testing of, all rescue apparatus of the brigade. He shall check the equipment of his party, and, immediately before entering irrespirable air, shall make sure that all apparatus is working properly:

Provided that if the leader and the manager of the mine consider that in order to save life the brigade should proceed at once into the mine, this test may be dispensed with if the apparatus has previously been tested at a Rescue Station.

51. *Duties of leader underground.*—(*1*) If the atmosphere is clear, the leader shall, when passing the junction of two or more roads, clearly indicate the route by means of arrow-marks in chalk. If the atmosphere is obscure the leader shall see that a life-line is led in from fresh air, and shall not allow any member of the brigade to move out of reach of that line; or, if that course is impracticable, he shall not proceed until every road branching from the route is fenced across the opening.

(*2*) The leader shall keep the team together and shall not allow any member of the team to stray.

(*3*) When using rescue apparatus the leader shall carry a watch, shall read the pressure of the compressed oxygen every 20 minutes or thereabouts, and shall commence the return journey in ample time. In travelling he shall adapt the rate to that of the slowest member. If any member of the corps or brigade is in distress, he shall immediately return to the fresh air base with the whole brigade.

(*4*) The leader shall not permit any corps or brigade using breathing apparatus in a mine to remain at work for longer than 1½ hours at any one time.

52. *Duties of members of rescue brigades.*—Every member of a rescue corps or brigade engaged in work with breathing apparatus in a mine shall obey the orders of the leader of the team.

53. *Travelling with rescue apparatus.*—In travelling with rescue apparatus, each member of the brigade shall keep the place given him when numbering off. If the pace is too quick, or if distress is felt, the member shall at once call attention to the fact.

54. *Restriction on second spell of work.*—No person shall commence a second or subsequent spell of work in noxious air without being examined and passed by a qualified medical practitioner, if present, or by the Rescue Station Superintendent or other competent person if a qualified practitioner be not present.

55. *Code of signals.*—Members of rescue corps or brigade shall, in general, use the signals prescribed in Schedule VI to these rules, in communicating to one another.

SCHEDULE I.

[See Rule 32 (*1*).]

Apparatus and Equipment.

Minimum to be kept at each Rescue Station.—(*i*) Twenty-four complete suits of breathing apparatus, with means of supplying sufficient oxygen or liquid air to enable such apparatus to be constantly used for two days, and of charging such apparatus.

If the type of apparatus admits of it, one set of apparatus in every four shall be provided with an attachment for supplying oxygen or air to any person found overcome by noxious gases in a mine.

(*ii*) Four smoke helmets or other apparatus serving the same purpose with not less than 120 feet of tubing for each.

(*iii*) Twenty electric safety lamps or electric torches of a type approved by the Chief Inspector; and 100 approved flame safety lamps.

APPENDIX IV—*contd.*

Miscellaneous—*contd.*

Statement No. 4—*contd.*

SCHEDULE I—*concld.*

(*iv*) Four oxygen reviving apparatus (not of the forced breathing type) each with a cylinder or cylinders capable of supplying at least 20 cubic feet of oxygen.

(*v*) Thirty gas masks of a type approved by the Chief Inspector with two refills for each.

(*vi*) A first-aid box or boxes.

(*vii*) Fresh drinking water.

(*viii*) Cages of small birds for testing for carbon monoxide.

(*ix*) A motor ambulance or car of adequate capacity and power in constant readiness.

(*x*) Two portable signalling devices.

SCHEDULE II.

[See Rule 32 (*5*).]

Breathing Apparatus: Adjustment and tests.

1. In every breathing apparatus which is arranged so as to give a uniform oxygen delivery, the reducing valve shall be so adjusted as to supply not less than two litres of oxygen per minute.

2. Every breathing apparatus shall be thoroughly tested at least once a month in the following manner, and the results of the test giving such particulars as the Chief Inspector by order in writing may specify in this behalf shall be recorded: —

(*i*) The apparatus shall be carefully examined in respect of its general condition and particular attention shall be given to any delicate and perishable parts.

(*ii*) The apparatus shall be tested for leakage by completely immersing it in water. For the purpose of this test the apparatus shall be fully distended and if it is a compressed oxygen apparatus the oxygen supply shall be turned on. The apparatus, immersed in water, shall be well shaken and closely examined in every part for leakage by the Superintendent or one of the instructors of the Rescue Station, or by the captain of the rescue brigade. If any leakage is observed the apparatus shall be deemed unsafe for use.

This test may be omitted in respect of the pack of a liquid air apparatus in so far as it would be damaged by immersion.

(*iii*) The pressure at which any automatic relief valve discharges shall be measured.

3. The following additional tests shall be applied to compressed oxygen apparatus:—

(*i*) The pressure in the oxygen cylinder shall be measured.

(*ii*) The rate of delivery of oxygen shall be measured by a flow-meter and if that rate is capable of being adjusted by the wearer of the apparatus, it shall be measured over the whole range of adjustment.

4. No breathing apparatus shall be used underground unless immediately before use it has been tested and found safe in the manner prescribed by paragraph (ii) of clause 2 of this Schedule:

Provided that as a matter of urgency to save life, this test may be omitted and a test for leakage by mouth suction applied instead.

5. The oxygen in every cylinder supplied for use in connection with breathing apparatus shall be analysed before being used in a breathing apparatus, and no oxygen which is found to contain more than two per cent. of impurities shall be used. The results of every analysis giving such particulars as the Chief Inspector may require shall be recorded.

6. Flow-meters shall be tested for accuracy at least once in every six months, and the results of every test giving such particulars as the Chief Inspector may require shall be recorded.

7. Where by this Schedule any particulars are required to be recorded, they shall be recorded forthwith in a book to be kept at the station or mine, as the case may be.

APPENDIX IV—*contd.*

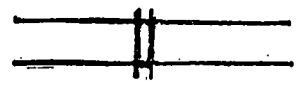
Miscellaneous—*contd.*

Statement No. 4—*contd.*

SCHEDULE III.

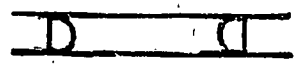
(See Rule 37.)

Code of Signs.

BRICK, STONE, OR VENTILATION STOPPINGS . 

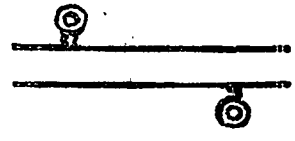
FIRE DAMS OR SEALS . . . . .

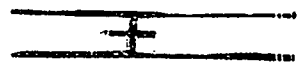
WATER DAMS . . . . .

DOORS . . . . . 

REGULATORS . . . . .

AIR CROSSINGS . . . . .

TELEPHONES . . . . . 

UNDERGROUND AMBULANCE STATION IN RED . . . 

DIRECTION OF AIR CURRENT . . . . .
INTAKE AIRWAYS—BLUE . . . . . .
RETURN AIRWAYS—RED . . . . . .

APPENDIX IV—*contd.*

Miscellaneous—*contd.*

Statement No. 4—*contd.*

SCHEDULE IV.

[SEE RULES 38 (2) (*i*) AND 39.]

Medical Examination.

The medical practitioner shall make a thorough examination of each person to be trained or kept in training and shall devote particular attention to the following requirements:—

I. The person must be free from—

(*i*) any tendency to fainting or vertigo;

(*ii*) any chronic obstruction in the air passages;

(*iii*) dyspnoea on light exertion;

(*iv*) nystagmus; any marked degree of myopia or any other serious optical defect or disease;

(*v*) deafness.

II. The person must be of good physical development and mental alertness, and capable of undergoing hard physical exertion for not less than 15 minutes without being unduly distressed or fatigued.

SCHEDULE V.

(SEE RULE 40.)

Part I.—Preliminary Course.

The course of instruction and practices shall be as follows:—

A. *Instruction in*:

(*i*) the general methods of dealing with underground fires and the recovery of mines after fires and explosions;

(*ii*) the construction, use, repair, maintenance and testing of the type or types provided of breathing apparatus and of smoke helmets or other apparatus serving the same purpose;

(*iii*) the use of methods and apparatus for reviving men;

(*iv*) the properties and detection of the noxious and inflammable gases which may be found in mines;

(*v*) the taking of gas samples in irrespirable atmospheres;

(*vi*) the reading of mine plans;

(*vii*) the requirements contained in Chapter VI and Schedule VI to these Rules.

B. *Practices*—not less than 12 for each man with breathing apparatus and in addition not less than two for each man with smoke helmets or other apparatus serving the same purpose, in each case under conditions devised to resemble those likely to be encountered in underground operations requiring the use of such apparatus.

(*a*) The practices shall be carried out as follows:—

(*i*) *For Permanent Rescue Corps.*—By at least five members jointly.

(*ii*) *For Men from Mines to act with Rescue Corps.*—Not more than eight nor less than five men shall take part in any practice. If five men from the mine do not attend on any occasion the number may be made up by members of the permanent rescue corps. So far as practicable the same five men shall practise together as one brigade.

(*b*) The practices with breathing apparatus shall take place in ordinary air and shall progress gradually until practices can be carried out in a hot and irrespirable atmosphere.

(*c*) The practices with breathing apparatus shall comprise the following operations:—

(*i*) repeatedly raising and lowering of a weight of 56 lb. to and from a height of six feet by means of a rope and pulley,

(*ii*) walking continuously at a fair pace for half an hour,

APPENDIX IV—*contd.*

Miscellaneous—*contd.*

Statement No. 4—*concld.*

SCHEDULE V—*concld.*

(*iii*) building and removing temporary stoppings of stone, brick, sandbags, brattice cloth, or other materials, and carrying the materials required for such operations over a distance of at least ten yards,

(*iv*) removing debris in confined spaces as representing the clearing of a fall of roof,

(*v*) setting timber or other roof supports,

(*vi*) carrying, pushing or pulling on a stretcher a live person or dummy body weighing 150 lb. along the length of the gallery.

(*vii*) the rapid establishment of communication.

Part II.—Practices and Instruction after Becoming Efficient.

A. *Practices.*

Permanent Rescue Corps.—In addition to regular practices at the Rescue Station, practices with breathing apparatus underground in a mine at least once in each quarter and at least six times in each year. Members who are not employed regularly underground in mines shall have six further practices underground in mines in each year, making twelve practices in all.

Men from Mines to act with Permanent Rescue Corps.—Practices with breathing apparatus at least twice in each quarter and at least six times in each year, of which at least two shall take place in mines, and the remainder in a hot and irrespirable atmosphere.

B. *Instruction.*—Revision of all subjects included in Part I.

SCHEDULE VI.

(SEE RULES 41 AND 55.)

Code of Signals.

Electric Signalling.	Signals.	Signalling between Members of a brigade.	Signals.
"Distress" or "Help Wanted" . .	One ring . .	"Distress" or "Help Wanted"	One hoot.
	(IF NO ANSWER IS GIVEN to a call, "Distress" is to be understood.)		
"Not understood" or "Repeat the Message"	Two rings .	Halt . . .	Two hoots.
"No"	Three rings .	Retire . .	Three hoots.
"Yes" or "All right" or "All's well" .	Four rings .	Advance . .	Four hoots.
To "ring up" To "ring off" . . .	Five rings. .	To call attention .	Five hoots.

M. S. A. HYDARI,
Secy. to the Govt. of India.

APPENDIX IV—*contd.*

Miscellaneous—*contd.*

Statement No. 5.

NOTIFICATION.

New Delhi, the 1st March 1939.

No. M.-1051.—In exercise of the powers conferred by section 46 of the Indian Mines Act, 1923 (IV of 1923), the Central Government is pleased to direct that the following further amendments shall be made in the notification of the Government of India in the Department of Labour, No. M.-1051, dated the 20th January 1938, namely :—

In the Schedule annexed to the said notification—

(i) after entry 6, the following entry shall be inserted, namely :—

" 6-A. The following mines in the Province of Delhi, namely :—	
Stone mines Nos. 2 to 15 in the Delhi District specified in Appendix I.	The provisions contained in sections 22A 22B, 22C, 22D, 23, 23B, 26A and 28."

(ii) in Appendix I to the said Schedule under the head " Delhi "—

(a) for the Sub-head " Stone Mine ", the sub-head " Stone Mines " shall be substituted ;

(b) to the entry under the said sub-head the following entries shall be added, namely :—

" 2. Jhandewala .	Public Works Department.	Jhandewala Estate .	Delhi .	Delhi.
3. Idgah No. 1 .	Do. .	Do. .	Do. .	Do.
4. Idgah No. 2 .	Public Works Department and Delhi Municipal Committee.	Delhi Municipality .	Do. .	Do.
5. Bagh Mochi .	Public Works Department.	Arakpur Bagh Mochi	Do. .	Do.
6. Mutiny Memorial Road.	Sunjhia Nath . . .	Notified Area, Delhi	Do. .	Do.
7. Rattiawali .	Ch. Sada Ram . . .	Sadhaura Khurd .	Do. .	Do.
8. Rattiawali .	Mst. Phhola . . .	Do. .	Do. .	Do.
9. Rattiawali .	Ch. Ram Kishen . .	Do. .	Do. .	Do.
10. Rattiawali .	Ch. Ram Singh . .	Do. .	Do. .	Do.
11. Rattiawali .	Ch. Bhagwan Das . .	Do. .	Do. .	Do.
12. Rattiawali .	Ch. Jagdish Pershad .	Do. .	Do. .	Do.
13. Rattiawali .	Tara Chand . . .	Do. .	Do. .	Do.
14. Rattiawali .	Mst. Sukh Devi . .	Do. .	Do. .	Do.
15. Rattiawali .	Proprietory body of the village.	Khampur Raya .	Do. .	Do.

M. S. A. HYDARI,
Secy. to the Govt. of India.

F

APPENDIX IV—*contd.*

Miscellaneous—*contd.*

Statement No. 6.

NOTIFICATION.

New Delhi, the 9th March 1939.

No. M.-1055 (1).—In exercise of the powers conferred by sub-section (1) of section 10 of the Indian Mines Act, 1923 (IV of 1923), the Central Government is pleased to direct that the following amendments shall be made in the notification of the Government of India in the Department of Labour, No. M-1055 (1), dated the 24th August 1938, relating to the constitution of a Mining Board for the coal mines in the province of Bihar namely :—

In the said notification, for entries (1) and (3) the following entries shall respectively be substituted, namely :—

"(1) Mr. A. P. Middleton, I.C.S., Commissioner, Chota Nagpur Division—Chairman (nominated by the Central Government) ; and

(3) Rai Bahadur Nagendra Nath Roy, Additional Deputy Commissioner, Dhanbad—Member (nominated by the Central Government)."

M. S. A. HYDARI,

Secy. to the Govt. of India.

Statement No. 7.

NOTIFICATION.

New Delhi, the 9th March 1939.

No. M.-1055 (2).—In exercise of the powers conferred by sub-section (*1*) of section 10 of the Indian Mines Act, 1923 (IV of 1923), the Central Government is pleased to direct that the following amendments shall be made in the notification of the Government of India in the Department of Labour No. M-1055(2), dated the 24th August 1938, relating to the constitution of a Mining Board for mines other than coal mines in the province of Bihar, namely :—

In the said notification, for entries Nos. (1), (3), (6) and (7) the following entries shall be substituted respectively, namely :—

"(1) Mr. A. P. Middleton, I. C. S., Commissioner, Chota Nagpur Division—Chairman (nominated by the Central Government) ;

(3) Mr. J. W. Houlton, C. I. E., I. C. S., Deputy Commissioner, Hazaribagh—Member (nominated by the Central Government) ;

(6) Mr. N. P. Thadani, I. C. S., Deputy Commissioner of Singhbhum—Member (nominated by the Central Government to represent the interest of miners) ; and

(7) Dr. H. W. T. Martin, M.B., Ch. B., Chief Medical Officer of the Indian Copper Corporation Limited, Ghatsila—Member (nominated by the Central Government to represent the interest of miners)."

M. S. A. HYDARI,

Secretary to the Government of India.

APPENDIX IV—*contd.*

Miscellaneous—*contd.*

Statement No. 8.

NOTIFICATION.

New Delhi, the 20th April 1939.

No. M-955.—In exercise of the powers conferred by rule 4 of the Coal Mines Rescue Rules, 1939, the Central Government is pleased to constitute the Rescue Stations Committee and to direct that it shall consists of the following members, namely :—

1. Mr. N. Barraclough, Inspector of Mines, No. 1 Circle, nominated by the Chief Inspector of Mines;
2. Mr. S. F. Tarlton, Chief Mining Engineer, Burrakur Coal Company Limited, nominated by the Indian Mining Association;
3. Mr. P. Basu of Messrs. North Adjai Coal Company Limited, nominated by the Indian Mining Federation;
4. Mr. W. McDonald, Manager, Victoria Colliery, Kulti, nominated by the National Association of Colliery Managers, Indian Branch;
5. Dr. R. P. Sinha, Professor of Mining Engineering, Indian School of Mines, Dhanbad, nominated by the Indian Mine Managers Association;
6. Mr. P. C. Bose, Secretary of the Indian Miners' Association, nominated by the registered trade unions of miners (to represent the interest of miners); and
7. Rao Bahadur D. D. Thacker of Pure Jharia Colliery, nominated by the Central Government (to represent the interest of miners).

M. S. A. HYDARI,
Secretary to the Government of India.

Statement No. 9.

NOTIFICATION.

Simla, the 5th July 1939.

No. M-955 (1).—In exercise of the powers conferred by section 29 of the Indian Mines Act, 1923 (IV of 1923), the Central Government is pleased to direct that the following further amendments shall be made in the Indian Coal Mines Regulations, 1926, the same having been previously published as required by sub-section (*1*) of section 31 of the said Act, namely :—

In the said Regulations—

I. After regulation 70A, the following regulation shall be inserted, namely :—

"70B. (*1*) In any mine in which inflammable gas has been found during the previous twelve months, all unused workings in which inflammable gas may accumulate and which are not permanently sealed off, shall, at least once in every week, be inspected for the presence of inflammable gas, by the competent person appointed under regulation 70.

(*2*) The inspection shall be made with an approved locked flame safety lamp, and no additional light shall be used, other than an approved electric torch or lamp.

APPENDIX IV—*contd.*

Miscellaneous—*contd.*

Statement No. 9—*concld.*

(*3*) The result of every such inspection shall be reported by the person making it in the manner required by sub-regulation (*5*) of regulation 70 and shall be recorded in the book maintained in accordance with sub-regulation (*2*) of that regulation.

(*4*) Nothing in this regulation shall be construed to affect the provisions of regulation 70."

II. After regulation 121, the following regulation shall be inserted, namely :—

"121A. (*1*) The Chief Inspector may require the manager of any mine in which, or in any part of which, a mechanical ventilator is in use, to submit within one month Standing Orders specifying the action that shall be taken with respect to the withdrawal of workmen from such mine or parts of such mine in the event of a stoppage of the mechanical ventilator.

(*2*) The Chief Inspector may approve of such Standing Orders either in the form submitted to him or with such additions or alterations as he may think fit and shall give notice in writing to the manager that the Standing Orders in the form approved by him shall be enforced at the mine.

(*3*) On receipt of the notice from the Chief Inspector, the manager shall post the Standing Orders in conspicuous places at the mine both above and below ground and shall be responsible for securing effective compliance with them."

III. For clause (*g*) of regulation 127, the following clause shall be substituted, namely :—

"(*g*) No person shall have in his possession any unlocked safety lamp or naked light, and if it appears to any person that any safety lamp in his possession is defective or insecure he shall at once carefully extinguish the flame and report the fact to the sirdar, overman or manager."

IV. After regulation 134, the following regulation shall be inserted, namely :—

"135. (*1*) In every mine or part of a mine in which the use of safety lamps is for the time being required by or in pursuance of these regulations no person shall have in his possession any match, smoking apparatus or any apparatus of any kind for striking a light except such apparatus for the purpose of shot firing or relighting lamps as the Chief Inspector may by general or special order in writing authorise in this behalf.

(*2*) A competent person appointed in writing by the manager for the purpose shall search all persons employed below ground immediately before they enter such mine or part of a mine for the purpose of ascertaining whether they have in their possession any article of the nature described in sub-regulation (*1*).

(*3*) The person conducting the search shall—

(*a*) search or turn out all pockets ;

(*b*) pass his hand over all clothing ; and

(*c*) examine any article in the possession of the person searched.

(*4*) If the person conducting the search suspects that the person searched is concealing any article of the nature described in sub-regulation (*1*), he shall detain him and as soon as possible refer the matter to the manager or other official authorised by the manager for the purpose who shall not allow such person to enter the mine until he is satisfied that the person has no such article in his possession."

M. S. A. HYDARI,

Secretary to the Government of India.

APPENDIX IV—*contd.*

Miscellaneous—*contd.*

Statement No. 10.

NOTIFICATION.

Simla, the 20th July 1939.

No. M.-955.—In exercise of the powers conferred by section 29 of the Indian Mines Act, 1923 (IV of 1923), the Central Government is pleased to direct that the following further amendments shall be made in the Indian Coal Mines Regulations, 1926, the same having been previously published as required by sub-section (*1*) of section 31 of the said Act, namely:—

In the said Regulations—

I. Sub-regulation (*3*) of regulation 68 shall be omitted.

II. For regulations 77 and 78, the following regulations shall be substituted, namely:—

"77. (*1*) The dimensions of pillars and galleries and the shape of pillars formed in any seam shall be such as to ensure stability during the formation of pillars, during extraction of pillars, and during the period between such formation and extraction.

(*2*) Save with the previous permission in writing of an Inspector, no gallery in a seam shall exceed 10 feet in height or 16 feet in width.

(*3*) Where the "pillar and stall" system of working is adopted the pillars formed in any seam shall normally be rectangular in shape.

(*4*) The distance between the centres of any two adjacent pillars left in a seam shall not be less than that specified in the appended table as corresponding to the depth of the seam from the surface and the average width of the galleries in the workings in question.

Depth of seam from surface.	Where the average width of the galleries does not exceed 10 feet, the distance between centres of adjacent pillars shall not be less than—	Where the average width of the galleries does not exceed 12 feet, the distance between centres of adjacent pillars shall not be less than—	Where the average width of the galleries does not exceed 14 feet, the distance between centres of adjacent pillars shall not be less than—	Where the average width of the galleries does not exceed 16 feet, the distance between centres of adjacent pillars shall not be less than—
	Feet.	Feet.	Feet.	Feet.
Not exceeding 200 feet .	40	50	60	65
Exceeding 200, but not exceeding 300 feet.	45	55	65	70
Exceeding 300, but not exceeding 500 feet.	55	65	75	85
Exceeding 500, but not exceeding 800 feet.	75	85	100	115
Exceeding 800 feet . .	95	115	130	150

APPENDIX IV—*contd.*

Miscellaneous—*contd.*

Statement No. 10—*contd.*

Provided that the Chief Inspector may, in the case of any particular seam or mine, by order in writing and subject to such conditions as he may specify, vary the distances specified in the said table.

(*5*) Nothing in sub-regulations (*2*), (*3*) and (*4*) shall apply to workings in a mine made before the coming into force of this regulation. In such workings the following provisions shall apply, except in depillaring operations:—

(*a*) if the distances between the centres of adjacent pillars are smaller than those specified in the table appended to sub-regulation (*4*), the pillars shall not be further reduced;

(*b*) if the distances between the centres of adjacent pillars are not smaller than those specified in the table appended to sub-regulation (*4*), the pillars shall not be so reduced as to render those distances smaller than—

(*i*) the distances so specified, or

(*ii*) any distance required in this behalf by the Chief Inspector;

(*c*) if the height or width of a gallery exceeds the figure specified in sub-regulation (*2*), the dimensions of the gallery shall not be further increased without the permission in writing of an Inspector; and

(*d*) if the height or width of a gallery is less than the figure specified in sub-regulation (*2*), it may be increased only to the extent so specified or to such extent as may be permitted by an Inspector in writing.

(*6*) In the case of all workings, where in the opinion of an Inspector the dimensions of pillars or galleries are such as to render it likely that crushing of pillars or the premature collapse of any part of the workings will occur either before or during the extraction of pillars, he may, by order in writing, require such modification of those dimensions in respect of any future working as he shall specify.

78. (*1*) The extraction of pillars shall be conducted in such a way as to prevent as far as possible the extension of a collapse or subsidence of the goaf over pillars which have not been extracted. Adequate timber or other supports shall be used where necessary:

(*2*) Save as provided by sub-regulation (*3*), no pillars shall be reduced or split in such a manner as to reduce the dimensions of the resultant pillars below those required by regulation 77 or by any order passed thereunder, nor shall any gallery be so heightened as to exceed the height required by or under that regulation.

(*3*) During the systematic extraction of pillars no "splitting" or reduction of pillars or the heightening of galleries shall be effected for a greater distance than the length of two pillars ahead of the pillar that is being extracted or from the point at which pillar extraction is about to begin.

(*4*) An Inspector may by order in writing relax the provisions of sub-regulations (*2*) and (*3*) in respect of any specified workings to such extent and on such conditions as he may specify in the order."

III. Regulation 78-A shall be re-numbered as regulation 78-B and before that regulation as so re-numbered the following regulation shall be inserted, namely:—

"78-A. Nothing in regulation 77 or regulation 78 shall prevent the driving of any gallery through any pillar or the enlargement of any gallery beyond the limits prescribed by or under these regulations when in the opinion of the manager such work is necessary for haulage, ventilation, drainage or any other purpose necessary for the proper working of the mine, if a week's previous notice of the intention to undertake such work has been sent to the Inspector."

APPENDIX IV—*contd.*

Miscellaneous—*contd.*

Statement No. 10—*contd.*

IV. For regulation 80, the following regulation shall be substituted, namely :—

"80. (*1*) In any mine in which two or more seams or sections of a seam are close to each other, the pillars in the one seam or section shall, where the strata are not highly inclined, be, as far as practicable, vertically above or below the pillars in the other seam or section.

(*2*) No work in a higher seam or section shall be done over an area in a lower seam or section which may collapse unexpectedly.

(*3*) No seam in a mine shall be worked in more than one section without the permission in writing of the Chief Inspector and under such conditions for ensuring the stability and safety of the workings as he may specify.

(*4*) Every application for permission under sub-regulation (*3*) shall be accompanied by a plan showing the proposed layout of the workings, the thickness of the seam, the depth of the seam from the surface, the rate and direction of dip, the dimensions of pillars and galleries in each section and the thickness of the parting between the sections.

(*5*) Where a seam in a mine is worked in two or more sections every such section shall be deemed to form a separate seam and the parting left between any two such sections or between the workings made in any two seams in a mine which are close to each other, shall not be less than 10 feet in thickness :

Provided that an Inspector may by order in writing—

(*a*) permit a smaller thickness of parting, if he is of opinion that the stability of the workings will not be affected thereby, or

(*b*) require a greater thickness of parting, if he is of opinion that such greater thickness is necessary for the safety of the workings."

V. After regulation 80, the following regulation shall be inserted, namely :—

"80-A. If in any mine it appears to an Inspector authorised in this behalf in writing by the Chief Inspector that the provisions of regulation 77, regulation 78 or regulation 80 or of any order issued under any of those regulations have not been complied with, he may give notice in writing to the owner, agent or manager of the mine requiring him to take such protective measures, within such reasonable time, as he may specify in the notice ; and in case of non-compliance, the Inspector may, by order in writing addressed to the person to whom the notice was given, prohibit the extraction of coal in the part or parts of the mine in which protective measures are required to be taken until the requirements specified in the notice are complied with to his satisfaction."

VI. Sub-regulation (*3*) of regulation 81 shall be omitted.

VII. For regulation 82, the following regulation shall be substituted, namely :—

"82. (*1*) An appeal against any order passed by an Inspector under any of the following regulations, namely, regulations 68, 77, 78, 80, 80-A and 81, may be preferred to the Chief Inspector and the order of the Chief Inspector thereon shall, save as otherwise provided in sub-regulation (*2*) be final.

(*2*) An appeal against any order passed by the Chief Inspector—

(*a*) under sub-regulations (*4*) and (*5*) of regulation 77 or sub-regulation (*3*) of regulation 80 ; or

(*b*) on appeal under sub-regulation (*1*) of this regulation against any order of an Inspector passed under regulations 77, 78, 80 and 80-A, may be preferred to the Central Government, which shall refer the same to a Committee constituted in the manner laid down in sub-sections (*1*) and (*2*) of section 11 of the Act.

(*3*) The procedure laid down in sub-sections (*3*), (*4*) and (*5*) of section 11 of the Act shall apply to a reference made to a Committee under sub-regulation (*2*).

(*4*) Every order against which an appeal is preferred under sub-regulation (*2*) shall be complied with pending the receipt at the mine of the decision of the Committee :

APPENDIX IV—*contd.*

Miscellaneous—*contd.*

Statement No. 10—*concld.*

Provided that the Committee may, on the application of the appellant, suspend the operation of the order appealed against pending the disposal of the appeal."

VIII. Regulation 84 shall be re-numbered as sub-regulation (*2*) of that regulation, and before hat sub-regulation as so re-numbered, the following sub-regulation shall be inserted, namely :—

"(*1*) No person shall work in any place in which he has not been ordered to work either by an official of the mine or by a person authorised in this behalf by an official of the mine."

M. S. A. HYDARI,
Secy. to the Government of India.

Statement No. 11.

NOTIFICATION.

New Delhi, the 17th October 1939.

No. M.-955 (1).—In exercise of the powers conferred by Section 5 of the Coal Mines Safety (Stowing) Act, 1939 (XIX of 1939), the Central Government is pleased—

(*i*) to appoint the 1st December 1939 as the date from which the duties of excise referred to in the said section shall be levied and collected ;

(*ii*) to fix two annas per ton as the rate at which the said duty shall be levied and collected on coal and soft coke ; and

(*iii*) to fix three annas per ton as the rate at which the said duty of excise shall be levied and collected on hard coke.

M. S. A. HYDARI,
Secretary to the Government of India.

Statement No. 12.

CIRCULAR No. 1 OF 1939.

Dated Dhanbad, the 21st August 1939.

To

The Manager,

———— ———— ————Colliery,
———— ———— — P. O.

It is proposed to amend Bye-law 25 for coal mines. The amended by-law will read as follows :—

> " Bye-law 25.—Every person using a safety lamp shall take proper care of it and shall not place it within reach of the swing of any tool. If the lamp becomes damaged he shall at once carefully lower the flame until it is extinguished, and at the first opportunity shall report the damage to the overman or sirdar."

As it will take some time to amend the bye-law it is requested that you will kindly instruct all users of safety lamps in the proper method of how carefully to lower the flame and extinguish the lamp.

W. KIRBY,
Chief Inspector of Mines in India.

APPENDIX IV—*contd.*

Miscellaneous—*contd.*

Statement No. 13.

NOTIFICATION.

Simla, the 10th August 1939.

No. M.-955.—In exercise of the powers conferred by section 3 of the Coal Mines Safety (Stowing) Act, 1939 (XIX of 1939), the Central Government is pleased, with effect from 1st November 1939, to constitute the Coal Mines Stowing Board and to direct that it shall consist of the following members, namely :—

Chairman.	
Mr. N. Mahadeva Ayyar, I. C. S.	Appointed by the Central Government.
The Chief Inspector of Mines in India (*ex-officio*) .	.....
Mr. J. B. Ross of Messrs. Shaw Wallace & Company.	Nominated by the Indian Mining Association.
Mr. C. A. Innes of Messrs. Andrew Yule & Company, Limited.	
Mr. M. N. Mookherjee, M. L. A. (Bihar) . . .	Nominated by the Indian Mining Federation.
Mr. A. L. Ojha	Nominated by the Indian Colliery Owners' Association.

M. S. A. HYDARI,

Secretary to the Government of India.

Statement No. 14.

NOTIFICATION.

New Delhi, the 17th October 1939.

No. M.-955 (2).—In exercise of the powers conferred by section 12 of the Coal Mines Safety (Stowing) Act, 1939 (XIX of 1939), the Central Government is pleased to make the following rules, the same having been previously published as required by sub-section (*1*) of the said section, namely :—

COAL MINES SAFETY (STOWING) RULES.

CHAPTER I.

Preliminary.

1. *Short title and extent.*—(*1*) These rules may be called the Coal Mines Safety (Stowing) Rules, 1939.

(*2*) They extend to the whole of British India except Assam and the Punjab.

APPENDIX IV—*contd.*

Miscellaneous—*contd.*

Statement No. 14—*contd.*

2. *Definitions.*—In these rules, unless there is anything repugnant in the subject or context,—

(*a*) "Act" means the Coal Mines Safety (Stowing) Act, 1939 (XIX of 1939);

(*b*) "Board" means the Coal Mines Stowing Board;

(*c*) "Chairman" means the Chairman of the Board;

(*d*) "Committee" means a Committee of Inquiry appointed under section 11 of the Act;

(*e*) "Fund" means the Coal Mines Stowing Fund;

(*f*) "member" means a member of the Board;

(*g*) "section" means a section of the Act.

CHAPTER II.

The board and its Procedure.

3. *Co-opted members.*—The Board may, under sub-section (*1*) of section 4, co-opt as members any persons possessing one or more of the following qualifications, namely:—

(*i*) A first class colliery manager's certificate of competency, or a degree or diploma in mining or special knowledge in mining affairs.

(*ii*) A university degree or equivalent qualification in mechanical, electrical or civil engineering or in fuel technology.

(*iii*) A university degree or diploma or equivalent qualification in geology.

(*iv*) Qualifications entitling a person to act as auditor of companies under section 144 of the Indian Companies Act, 1913 (VII of 1913).

(*v*) Qualifications entitling a person to practise at the bar of a High Court in British India.

(*vi*) Experience of not less than 5 years in the management of a Zemindari.

4. *Nominations to fill vacancies.*—When a vacancy occurs in the case of a nominated member or at any time within two months of the date when such a vacancy will occur in the ordinary course of events, the Central Government shall, by notice in writing, call upon the body concerned to nominate a person to fill the vacancy, and the nomination shall be made within thirty days of the date of issue of such notice.

5. *Term of office.*—(*1*) Save as otherwise provided in these rules, a nominated member shall hold office for three years from the date of his appointment and shall be eligible for re-nomination:

Provided that an outgoing nominated member may continue in office until the appointment of his successor is notified.

(*2*) A member nominated to fill a casual vacancy or a member appointed by the Central Government on the failure of any body entitled to make a nomination, shall hold office for as long as the member whose place he fills would have been entitled to hold office if the vacancy had not occurred or the nomination had been made, as the case may be.

6. *Resignation.*—A nominated member may resign his office by letter addressed to the Chairman.

7. *Absence from India.*—(*1*) Before a nominated member leaves India—

(*a*) he shall intimate to the Chairman the date of his departure from and the date of his expected return to India; or

(*b*) if he intends to be absent from India for a longer period than six months, he shall tender his resignation.

(*2*) If any nominated member leaves India without taking the action required by sub-rule (*1*), he shall be deemed to have resigned with effect from the date of his departure from India.

APPENDIX IV—*contd.*

Miscellaneous—*contd.*

Statement No. 14—*contd.*

8. *Vacation of office.*—A nominated member shall be deemed to have vacated his seat on the Board—

(*a*) if he becomes bankrupt or insolvent or suspends payment or compounds with his creditors; or

(*b*) if he is convicted of any non-bailable offence punishable under the Indian Penal Code (Act XLV of 1860); or

(*c*) if he is absent from meetings of the Board during a period of three consecutive months without leave of absence from the Board.

9. *Time and place of meetings.*—(*1*) The Chairman may at any time call a meeting of the Board and shall do so if a requisition for that purpose is presented to him by three or more members.

(*2*) The meetings of the Board shall, unless the Chairman in any case otherwise directs; be held in Calcutta.

10. *Notice of meeting.*—Not less than seven clear days before the date of any intended meeting of the Board notices of the time and place of such meeting, signed by the Chairman, shall be delivered at or posted to the usual place of residence of every member present in India :

Provided that an emergent meeting may be called by the Chairman at any time, but in such case the Chairman shall inform the members of the subject matter for discussion and the reasons for which he considers it urgent, and at such meeting no business which does not arise directly out of such subject matter shall be introduced or transacted.

11. *Presiding at meetings.*—The Chairman shall preside at every meeting of the Board at which he is present. If the Chairman is absent from any meeting the members present shall elect one of their number to preside over the meeting and the member so elected shall at that meeting exercise all the powers of the Chairman.

12. *Quorum.*—No business shall be transacted at a meeting of the Board unless at least three members are present :

Provided that if at any meeting less than three members attend, the Chairman may adjourn the meeting to a date not less than seven days later and inform the members present and notify other members that he proposes to dispose of the business at the adjourned meeting irrespective of there being a quorum, and it shall thereupon be lawful to dispose of the business at such adjourned meeting irrespective of the number attending.

13. *Disposal of business.*—(*1*) Every question upon which the Board is required to deliberate shall be considered either at its meetings or, if the Chairman so directs, by sending the necessary papers to members for opinion :

Provided that the papers need not be sent to any member who is absent from India.

(*2*) When a question is referred for opinion, any member may request that the question be considered at a meeting of the Board, and thereupon, the Chairman may, and if the request is made by three or more members shall, direct that it be so considered.

14. *List of business.*—(*1*) The Chairman shall send to each member present in India, at least seven days before a meeting of the Board, a list of business to be disposed of at that meeting.

(*2*) No business which is not on the list shall be considered at a meeting without the permission of the Chairman.

15. *Decision by majority.*—(*1*) Every question at a meeting of the Board shall be decided by a majority of votes of the members present and voting on that question.

APPENDIX IV—*contd.*

Miscellaneous—*contd.*

Statement No. 14—*contd.*

(*2*) Every question referred to the members for opinion shall, unless the Chairman in pursuance of sub-rule (*2*) of rule 13 reserves it for consideration at a meeting, be decided in accordance with the opinions of the the majority recording opinions.

(*3*) In the case of an equal division of votes or opinions, the Chairman shall exercise an additional vote or opinion.

16. *Record of business.*—A record shall be maintained of all business transacted by the Board copies of which shall be submitted to the Central Government.

17. *Revision.*—(*1*) The Central Government may for reasons to be recorded in writing review any decision of the Board and pass such orders in the matter as it thinks fit.

(*2*) The Board shall give effect to all crders passed by the Central Government under sub-rule (*1*).

18. *Salary and allowances of the Chairman.*—(*1*) The Chairman shall be paid a salary and allowances from the Fund at such rates as may be fixed by the Central Government.

(*2*) The Chairman shall also be paid from the Fund travelling allowances for journeys performed by him in his official capacity, at the same rates and on the same conditions as are prescribed by rules in the case of officers in the employ of the Central Government drawing the same salary as the Chairman.

(*3*) Contributions on account of the Chairman's pension and leave salary shall be paid from the Fund at such rates as may be fixed by the Central Government.

19. *Powers and duties of the Chairman.*—(*1*) The Chairman shall be the Principal Executive Officer of the Board and, as such, he shall—

(*a*) present all important papers and matters to the Board as early as practicable ;

(*b*) issue orders as to the method of carrying out the decisions of the Board ;

(*c*) grant or, subject to a resolution by the Board, authorise some other person to grant, receipts on behalf of the Board for all moneys received under the Act ;

(*d*) maintain or cause to be maintained an account of the receipts and expenditure of the Board ; and

(*e*) present an annual draft report on the working of the board to the Board for approval and submit the report in the form approved by the Board to the Central Government.

(*2*) The Chairman may sanction, without reference to the Board, expenditure on contingencies, supplies and services and purchase of articles required for the working of the office of the Board, subject to budget provision and to the condition that the expenditure on any single object does not exceed Rs. 500.

20. *Secretary to the Board.*—(*1*) The Secretary to the Board shall be a person, not being a member, appointed by the Board, with the approval of the Central Government.

(*2*) The Secretary shall perform such duties as are imposed upon him by these rules and such other duties as may be assigned to him by the Board.

21. *Board's Establishment.*—(*1*) The Board shall, from time to time, fix the scale of establishment and the salaries and allowances of all officers and servants to be employed by it, and may require security to be taken from them in such instances and to such amount as it thinks fit :

Provided that no post the maximum salary of which exceeds rupees five hundred per mensem shall be created without the previous sanction of the Central Government.

APPENDIX IV—*contd.*

Miscellaneous—*contd.*

Statement No. 14—*contd.*

(*2*) Subject to the scale of establishment fixed under sub-rule (1), the Chairman shall have power to appoint, dismiss, suspend, reduce or grant leave to any person in the service of the Board:

Provided that—

(*a*) no person shall be appointed to, or dismissed from, an office the maximum salary of which exceeds rupees five hundred without the sanction of the Central Government;

(*b*) no person shall be appointed to, or dismissed from an office, the maximum salary of which exceeds rupees two hundred but does not exceed rupees five hundred without the sanction of the Board at a meeting;

(*c*) the grant of leave, pay and allowances to officers and servants of the Board, who are not Government servants, shall be regulated by rules made by the Board; and

(*d*) the grant of leave, pay and allowances to a Government servant, whose services have been lent or transferred to the Board, shall be regulated according to the appropriate rules framed by the Central Government and applicable to such Government servant.

(*3*) In exercising the powers conferred by clause (*c*) of the proviso to sub-rule (*2*), the Board shall, so far as may be, apply the principles of the Rules framed by the Central Government for the corresponding classes of Government servants.

(*4*) Save with the previous sanction of the Central Government, no travelling allowance shall be paid to any officer or servant of the Board in excess of the amount which would be admissible under the Supplementary Rules framed by the Central Government to a Government servant of the corresponding grade.

22. *Remuneration of the members.*—(*1*) Each non-official member, including a non-official member co-opted under sub-section (*1*) of section 4, shall be paid Rs. 32 for each meeting of the Board attended by him, subject to a maximum of Rs. 64 for any one calendar month, and the actual travelling expenses incurred by him in attending the meeting.

(*2*) A Government servant appointed as a member, or co-opted as a member under sub-section (*1*) of section 4, shall be paid for attending a meeting of the Board such travelling allowance from the Fund as would be admissible to him under the appropriate rules if the journey had been performed on Government duty.

CHAPTER III.

The Fund and Accounts.

23. *Descriptions of hard coke liable to excise duty.*—All descriptions of hard coke manufactured in and despatched from collieries or coke-plants shall be subject to the duty of excise leviable on hard coke under section 5.

24. *Recovery of excise duty.*—(*1*) The duty of excise imposed under section 5 on coal, soft coke and hard coke shall, when such coal, soft coke or hard coke is despatched by rail from collieries or coke-plants, be collected by the Railway Administrations concerned, and such duty of excise shall be recovered—

(*i*) where the consignment is booked to a place situated outside British India, from the consignor;

(*ii*) where the consignment is booked to a place situated in British India—

(*a*) from the consignor, if the freight charges are being prepaid at the forwarding station,

(*b*) from the consignee, if the freight charges are collected at the destination of the consignment,

(*c*) from the party paying the freight, if the consignment is booked on the "weight only" system.

(*2*) In calculating the amount of duty of excise payable on any one consignment any fractions of an anna shall be rounded off to the nearest anna.

APPENDIX IV—*contd.*

Miscellaneous—*contd.*

Statement No. 14—*contd.*

25. *Declaration by consignor.*—All consignments of coke from collieries or coke-plants tendered for despatch by rail, shall be accompanied by a declaration advice note in which the consignor or his agent shall describe the consignment as either " soft coke " or " hard coke ", according to the nature of the consignment.

26. *Weight for charge.*—For the purpose of the levy of the excise duty, the weight of a consignment shall be that taken for the purpose of calculating the freight charges and fractions of a ton shall be rounded off to the nearest ton.

27. *Remittance of excise duty.*—The total amount of excise duty collected by each Railway Administration less—

(*a*) refunds and write-offs, authorised by the Railway Administration under rule 28,

(*b*) a deduction of such percentage, as the Central Government may, by notification in the Official Gazette, fix, towards the cost of collection,

shall, under advice to the Accountant General, Bengal, be remitted quarterly to the Reserve Bank of India at Calcutta for the credit of the Central Government in a special account.

28. *Refunds and recoveries.*—(*1*) Where the amount of the excise duty due under these rules has not been collected either wholly or in part or where the amount collected is in excess of the amount due, the Railway Administration shall deal with the undercharge or overcharge, as the case may be, on the same principle as apply to undercharges and overcharges in regard to railway freight charges.

(*2*) When it is proved to the satisfaction of the Board or any person authorised in this behalf by the Board, that any coal, on which the duty of excise under section 5 had previously been collected, has been used in the manufacture of any coke on which also the duty has been collected, the Board or the person authorised in this behalf by the Board may order refund of an amount equal to the duty collected on such coal to the person from whom such duty was collected.

29. *Deposit of money.*—The sum of money received under section 7 and any other moneys received by or on behalf of the Board shall be deposited to the credit of the Coal Mines Stowing Fund in the manner provided in rule 30 :

Provided that the Board may from time to time authorise the retention in the charge of the Chairman or any other person of such sum as it thinks fit as petty cash to meet contingent expenditure.

30. *Keeping of accounts in Banks.*—(*1*) The current account or accounts of the Board shall be kept in the Imperial Bank of India or such other Bank as may be approved by the Central Government, and all moneys at the disposal of the Board with the exception of petty cash and of moneys placed in fixed deposit or invested in accordance with the provisions hereinafter contained, shall be paid into those accounts.

(*2*) Any funds not required for current expenditure may be placed in fixed deposit with any Bank approved in this behalf by the Central Government or invested in the name of the Board in any security in which Trust property may lawfully be invested under the Indian Trusts Act, 1882 (II of 1882).

(*3*) The placing of money in fixed deposit and the investment thereof and the disposal of moneys so placed or invested shall be subject to the sanction of the Board.

(*4*) Payments by or on behalf of the Board shall be made in cash or by cheque drawn against a current account of the Board.

(*5*) The cheque referred to in sub-rule (*4*) and all orders for the making of deposits or investments or for the withdrawal of such deposits or the realization of such investments or for the disposal in any other manner of the funds of the Board shall be signed by the Secretary to the Board and countersigned by the Chairman or by a member authorised by the Board in this behalf.

31. *Budget.*—(*1*) The Board shall in each year prepare a budget for the ensuing financial year and shall submit it for the sanction of the Central Government on or before the 1st February.

(*2*) The budget shall include statements of—

(*i*) the estimated opening balance ;

(*ii*) the estimated receipts under section 7 and from other sources ; and

(*iii*) the proposed expenditure classified under the heads specified in sub-rule (*3*) of rule 33 and such other heads as may be settled at a meeting of the Board.

APPENDIX IV—*concld.*

Miscellaneous—*concld.*

Statement No. 14—*concld.*

32. *Keeping, auditing and publication of accounts.*—(*1*) The Board shall keep accounts of all moneys received in and expended out of the Fund during each financial year.

(*2*) Such accounts shall be examined and audited annually, or at such shorter intervals as the Central Government may require, by auditors appointed by the Central Government in this behalf.

(*3*) The auditors may disallow any item which has in their opinion been expended out of the Fund otherwise than as directed by or under the Act or these rules.

(*4*) If an item of expenditure is disallowed by the auditors, the Central Government may—

(*a*) either remit the disallowance made by the auditors; or

(*b*) sanction the expenditure; or

(*c*) direct that the amount be recovered from the person or persons responsible for the expenditure and credited to the Fund, provided that no recovery under this sub-clause shall be permissible if the expenditure has been incurred in good faith; or

(*d*) direct that the item disallowed shall be dealt with in such other way as the Central Government may think fit.

(*5*) The audited statement of receipts and expenditure together with the annual report referred to in clause (*e*) of sub-rule (*1*) of rule 19 shall be submitted to the Central Government not later than July in each year.

(*6*) An abstract statement of the accounts together with the auditor's report thereon shall be published annually in the Official Gazette.

33. *Receipts and Expenditure.*—(*1*) The accounts of receipts shall be shown under the following heads:—

(*a*) sum received under section 7,

(*b*) any other moneys received,

(*c*) any interest that may have accrued from the investment of such sum or moneys as aforesaid.

(*2*) Total receipts only shall be shown under each of the heads specified in sub-rule (*1*) and the opening balance, if any, shall also be stated.

(*3*) Accounts of expenditure shall be shown under the following heads:—

(*a*) administration of the Board,

(*b*) other expenditure connected with the administration of the Act,

(*c*) grant of stowing materials or other assistance for stowing operations to owners, agents or managers of coal mines,

(*d*) other measures taken in connection with the furtherance of the objects of the Act,

(*e*) miscellaneous.

(*4*) The closing balance of the year shall be shown at the foot of the accounts on the expenditure side.

(*5*) In addition to the particulars required by sub-rule (*3*), separate statements under heads (*c*) and (*d*) referred to in that sub-rule shall be drawn up, which shall show the sums paid to each owner, agent or manager of a coal mine independently, or spent otherwise.

M. S. A. HYDARI,

Secy. to the Govt. of India.

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